



**City of Kingston  
Report to Planning Committee  
Report Number PC-20-065**

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**To:** Chair and Members of the Planning Committee  
**From:** Paige Agnew, Commissioner, Community Services  
**Resource Staff:** Andrea Gummo, Manager, Policy Planning  
**Date of Meeting:** November 19, 2020  
**Subject:** Comprehensive Report for the Update to the Williamsville Main Street Study  
**File Number:** D35-003-2020  
**Address:** Williamsville Main Street  
**Application Type:** Official Plan & Zoning By-Law Amendment  
**Owner:** Various  
**Applicant:** City of Kingston

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**Council Strategic Plan Alignment:**

Theme: 1. Demonstrate leadership on climate action

2. Increase housing affordability
3. Improve walkability, roads, and transportation
4. Strengthen economic development opportunities
5. Foster healthy communities and vibrant spaces

Goal: 2.1 Pursue development of all types of housing city-wide through intensification and land use policies.

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**Executive Summary:**

The following is a comprehensive report recommending approval to the Planning Committee regarding applications for Official Plan and zoning by-law amendments submitted by the City of Kingston, for the update to the Williamsville Main Street Study and its implementing policies and provisions. This report describes the public engagement undertaken as part of the update to the study, and outlines the recommendations and associated policy and zoning changes, which are further detailed in the addendum to the Williamsville Main Street Study (Exhibit K).

On May 21, 2019, Council passed an Interim Control By-Law (ICBL) to restrict development to what is already permitted by Zoning By-Law Number 8499 within the Williamsville Main Street Corridor, for a period of one year. This was to allow staff to undertake a review of the Williamsville Main Street Study, the results of which are outlined in this report.

This study is supported by a detailed transportation model and study and a review of the servicing infrastructure capacity in the corridor. It is informed by research on other cities' approaches to intensification and land use compatibility. It is informed by consultation with members of the public, neighbourhood associations, and numerous stakeholders including industry representatives and property owners in the corridor. It is also informed by a new visual tool that shows a 3D model of the corridor. This work is the result of collaboration between Planning Services staff and Brent Toderian of Toderian UrbanWorks.

The Project Team identified four definitions of success for assessing options and are outlining them here to provide context to the recommendations. They include consideration of history and original intent; more recent Council priorities and direction; operational and process-related challenges; and the broader aspirations for strategic and timely infill development in the city in keeping with recent new thinking as part of the Density by Design exercise. These definitions are supported by new information and analysis to result in the recommendations presented in this addendum.

The following four "definitions of success" were identified and utilized:

1. Respect for, and a wish to get closer in implementation to, the "original vision/intent" of the Williamsville Main Street Study, where still applicable/appropriate;
2. Respect for, and a wish to reflect new needs and aspirations that have arisen in the city, and more recent or current Council priorities;
3. A need for a clear, understandable system that is easy to implement/operate; and
4. An approach that allows many/most individual projects to be viable under reasonable assumptions, with enough projects "green-lit" in the short to medium term to address strategic smart growth goals in this key urban corridor.

The recommendations outlined in this report build on the directions established by the Official Plan and the Williamsville Main Street Study. They represent a further refinement of the detailed

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implementation of those directions, based on additional technical study, seven years of experience in working with the policies, public consultation, and good land use planning principles. They also represent further understanding and refinement of Kingston's growth management goals, and the implementation of the Province's direction that municipalities focus growth within existing built up areas. The recommendations also include next steps for continued refinement of the transportation options within the Williamsville Main Street Study area.

The draft addendum to the Williamsville Main Street Study was presented at a Public Meeting before Planning Committee on August 13, 2020. Since the meeting, staff have continued to consult with members of the public and receive feedback about the draft addendum. This report describes the changes that have been made to the addendum to the Williamsville Main Street Study and outlines the additional public consultation undertaken to date.

The ICBL was impacted by the Province's emergency order related to the COVID-19 Pandemic. On August 11, 2020, Council approved an extension to the ICBL by 90 days, to allow time for public consultation prior to bringing final recommendations to Planning Committee. That extension was set to expire on November 23<sup>rd</sup>, but staff requested an additional extension at the November 3 Council meeting. This additional 38-day extension will provide the time necessary to present the implementing by-laws for proposed changes to the Official Plan and zoning by-law to Council, and will also include enough time for the 20-day appeal period required by the *Planning Act*. The ICBL now expires on December 31, 2020.

**Recommendation:**

**That** the Planning Committee recommends to Council:

**That** the applications for Official Plan and zoning by-law amendment (File Number D35-003-2020) submitted by the City of Kingston, for the update to the Williamsville Main Street Corridor, be approved; and

**That** the City of Kingston Official Plan, as amended, be further amended, amendment number 71, as per Exhibit A, (Draft By-Law and Schedule A to Amend the Official Plan) to Report Number PC-20-065; and

**That** By-Law Number 8499, entitled "Restricted Area (Zoning) By-Law of the Corporation of the City of Kingston", as amended, be further amended, as per Exhibit B (Draft By-Law and Schedule A to Amend Zoning By-Law Number 8499) to Report Number PC-20-065; and

**That** Council determines that in accordance with Section 34(17) of the *Planning Act*, no further notice is required prior to the passage of the by-law; and

**That** the amending by-laws be presented to Council for all three readings.

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**Authorizing Signatures:**

ORIGINAL SIGNED BY COMMISSIONER

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**Paige Agnew, Commissioner,  
Community Services**

ORIGINAL SIGNED BY CHIEF ADMINISTRATIVE OFFICER

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**Lanie Hurdle, Chief  
Administrative Officer**

**Consultation with the following Members of the Corporate Management Team:**

Peter Huigenbos, Commissioner, Business, Environment & Projects	Not required
Brad Joyce, Commissioner, Corporate Services	Not required
Jim Keech, President & CEO, Utilities Kingston	<input checked="" type="checkbox"/>
Desirée Kennedy, Chief Financial Officer & City Treasurer	Not required
Sheila Kidd, Commissioner, Transportation & Public Works	<input checked="" type="checkbox"/>



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**Options/Discussion:**

Since the implementation of the Princess Street Corridor Specific Policy Area, there has been a high level of development activity in the Williamsville Main Street portion of the corridor. The uptake in planning applications has included several developments that have proposed greater densities than those anticipated by the 2012 study. The development projects proposed over the last seven years have represented approximately 15 years' worth of growth, based on the assumptions of the original Study. As a result, there is a need to understand the technical impacts of current and future development from a transportation, servicing, and land use perspective. The Interim Control By-Law was passed to give staff time to study the impacts of development so far, and to update the Study based on what has resulted in the years since its completion, especially for results that were not contemplated by the original Study and Council approval of related policy.

This work has benefitted from context, conversations and observations resulting from the City's concurrent project Density by Design: Mid-rise and Tall Buildings Policy, which has helped to inform the changes proposed to the Study through the Addendum. This project has also provided numerous opportunities to connect with members of the public on the issues outlined in this report.

The transportation study that was completed for the 2012 Study used traffic modeling based on a macroscopic analysis of the traffic and transportation system. Given the level of intensification the City has seen on specific sites within the Williamsville Main Street, it is expected that there will be impacts at the intersection level to a greater extent than that which was originally considered. There is also a need to create a more comprehensive model of all travel modes (walking, cycling, and transit) within the study area. An updated transportation model of the neighbourhood allows for a more detailed analysis at the intersection level, referred to as a microsimulation, that would allow for a variety of development options to be evaluated. This would allow the City to better understand the impact of increases in density at specific locations across the corridor and better model pedestrian, cyclist, and transit needs.

Similarly, there is a need to better understand the cumulative impact of increased density on sewer and water servicing capacity within the study area, to phase development appropriately. Recent infrastructure investments on lower Princess Street have not yet been realized in a corresponding increase in the number of users. This is important to ensure lifecycle cost recovery. As per provincial direction, the future financial well-being of the City depends upon efficient land use patterns that capitalize on infrastructure investments. These investments are required to be made in specific locations of the City that provide walkability and enough future users to pay for their maintenance.

The changes recommended in this report require an application under the *Planning Act* to amend the City's Official Plan and Zoning By-Law Number 8499. This report and the attached Addendum to the Williamsville Main Street Study (Exhibit K) were the subject of a Public Meeting on August 13, 2020, as part of the statutory public process for such an amendment

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(combined Official Plan and zoning by-law amendment, application number D35-003-2020; Public Meeting [Report Number PC-20-028](#)).

In accordance with By-Law Number 2007-43, this application was subject to a pre-application meeting held on February 25, 2020, with the Planning Services department and various other departments and agencies. Following this, a complete application submission was made by the applicant, Planning Services department, on May 7, 2020.

### **Interim Control By-Law**

At their meeting on May 21, 2019, Council passed the following motion:

**That** staff be directed to complete a land use planning study by Q2 of 2020 of the policy and zoning framework with respect to angular plane and the allowance for where taller buildings are permitted within the Williamsville Main Street corridor, and make recommendations specifically clarifying where taller buildings or intensification greater than that permitted by the existing zoning by-law can be supported; and

**That** staff be directed, in conjunction with the land use planning study, to complete a detailed Vissim transportation model and study of the Williamsville Main Street corridor and to complete a review of the available servicing capacity to ensure that the densities considered across the corridor can be supported from a technical perspective; and

**That** Council authorize an additional budget of up to \$100,000.00 for the completion of the Vissim transportation model and study to be funded from the Working Fund Reserve; and

**That** Council enact an Interim Control By-law for the Williamsville Main Street Corridor as per Exhibit A (Draft By-Law and Schedule A) to Report Number 19-152, only prohibiting intensification of lands within the study area with anything in excess of what is permitted by the current zoning by-law; and

**That** the Interim Control By-Law be presented to Council for all three readings.

This Interim Control By-Law (ICBL) restricted development to what is permitted by the Official Plan and zoning by-law for a period of one year. Transition clauses were included in the ICBL to allow for development applications which were “complete” on or before the date of passing of the ICBL to continue to be processed under the existing policy framework.

The purpose of the ICBL was to allow staff to undertake a land use planning study of the policy and zoning framework for the Williamsville Main Street Corridor, and make recommendations clarifying what is permitted. The land use study was completed in conjunction with a detailed transportation model and study and a review of the servicing capacity, to verify the timing of

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when the densities considered across the corridor can be supported from a technical perspective.

The addendum to the Study (Exhibit K) provides additional background information regarding the implementation of the Study, the rationale for the ICBL, recent development activity in the corridor, and projected growth for the City.

The ICBL would have expired on May 21, 2020. However, the Provincial Emergency Order in response to the COVID-19 Pandemic had the effect of extending the by-law to August 24, 2020. On August 11, 2020, Council approved an extension to the ICBL by 90 days, to allow time for public consultation prior to bringing final recommendations to Planning Committee. That extension was set to expire on November 23, but staff requested an additional extension at the November 3 Council meeting. This additional 38-day extension will provide the time necessary to present the implementing by-laws for proposed changes to the Official Plan and zoning by-law to Council, and will also include enough time for the 20-day appeal period required by the *Planning Act*. The ICBL now expires on December 31, 2020.

### Site Characteristics

The study area, known as the Williamsville Main Street, is a 1.7 kilometre stretch of Princess Street from Division Street to the Bath Road and Concession Street intersection (Exhibits C and D). Despite Princess Street's role in the city's structure as the Corridor meant to accommodate a significant amount of infill and intensification (Official Plan – Schedule 2), the portion of Princess Street which makes up the Williamsville Main Street is under-utilized at present. Much of the study area is currently developed with one and two storey structures and several surface parking lots and other uses that do not effectively and efficiently use these central, serviced lands (e.g. gas stations and car dealerships).

The Williamsville Main Street is, however, currently experiencing significant development uptake, increases in land valuation, and an evolution in character. This redevelopment has supported a number of the City's goals as it provides additional housing in a location that supports active transportation and transit mode share goals. The two end 'nodes' of the corridor, being the intersection at Bath Road and Concession Street, adjacent to the Kingston Centre, and the intersection with Division Street, known locally as The Hub, provide walkable commercial amenities for residents and have the potential to accommodate further commercial and residential density in the future. The Williamsville Main Street also offers convenient access to the downtown core and to Queen's University, being areas of significant employment opportunity and growth in Kingston.

This section of Princess Street also provides a unique setting for redevelopment as a main street running through and surrounded by established residential neighbourhoods, including the historic village of Williamsville, the broader Williamsville neighbourhood, Sunnyside to the south, and the near-campus area. The surrounding neighbourhoods have an attractive, predominantly low-rise residential character. This presents many opportunities in terms of providing a variety of housing options for residents in the central urban area of the City. It also poses some

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challenges as these redevelopments, which provide much-needed density in the area, also begin to alter the long-standing relationship between the corridor and surrounding low-density residential uses.

### **Application and Submission**

This comprehensive report outlines the results of the above-noted review of the Study, includes a review of the feedback received from the public about the draft addendum, and presents a revised addendum to the Williamsville Main Street Study to address the items outlined in the ICBL.

Exhibit K provides the full text of the Addendum, which also includes a number of appendices. A summary of the recommendations are as follows:

- Continue to direct growth and intensification to the Williamsville Main Street corridor, with a focus on the short and medium terms, as well as the longer term once the necessary infrastructure becomes available in the Kingston Centre area. This corridor is a priority for intensification due to its central location and ability to support additional development from a municipal servicing and land use perspective. Infrastructure upgrades have been made in the corridor and on lower Princess Street in recent years, and intensification is required to capitalize on the public investments already made. It is important to note that while a number of potential intensification areas have been identified across the City as a result of detailed secondary planning work, not all areas are “shovel ready” and may require investments in infrastructure in order to accommodate additional development.
- Consider the financial viability of development in the corridor to ensure that development permissions align with a form of development that is likely to proceed in the short-term, while ensuring good land use planning principles are followed. The City of Kingston is facing a residential affordability and availability challenge and requires additional supply of residential units to apply downward pressure on the cost of housing, both rental and owned, and to provide a range of housing options. This is required for existing residents of Kingston as well as to accommodate newcomers to the city.

Planning Services has retained Watson & Associates Economists Ltd to provide a detailed examination of the potential market feasibility (based on typical local development costs and revenues) associated with development scenarios identified by staff. This work is intended to evaluate and test the financial viability of the proposed developments within the context of the local policy planning framework.

Based on this work, it appears that the land use permissions that apply to the Williamsville Main Street are generally not favourable for a private market development. Staff are recommending several changes to the existing policies to support financial viability of development, and will be continuing to monitor land values and consult with industry stakeholders to ensure that permissions align with a reasonably likelihood of

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some mid-rise development proceeding in the short-term, while ensuring that the outcomes represent good land use planning.

The risk of enacting planning policies that are not financially viable under current market conditions is that development will not be undertaken, at least in the short-term or until market conditions change to become more favourable. That risk is further heightened by the unprecedented uncertainty of market conditions brought on by the Coronavirus Pandemic. This can cause shortages in the supply of housing in the context of a growing municipality, as well as the delay of realization of various public policy objectives related to smart, strategically located infill development.

This can also lead to development applications requesting amendments well outside of what is permitted, which puts City staff into the position of reacting on a case-by-case basis to specific proposals. The City is required to accept and process/consider any development application that is submitted, even though a recommendation of approval is not required. In general, these types of development applications require intensive staff resources to process since they request forms or intensity of development not contemplated by the Official Plan.

3. Continue to prioritize the pedestrian experience to promote walkability and transit use in the corridor. Enhance requirements for a comfortable, interesting, and engaging public realm, with a focus on placemaking and neighbourhood and corridor character.
4. Broaden the focus of the Williamsville Main Street Study and its implementing policies to incorporate considerations related to effective implementation (both for staff and applicants), reasonable economic viability as it relates to the achievement of public interest objectives, and good land use planning principles that align with Council's Strategic Direction, including the 2019 Climate Emergency Declaration. More specifically, staff recommend:
  - a. Removing the use of angular plane provisions.
  - b. Increasing building setbacks from streets to create larger sidewalks/public space.
  - c. Using predictable and easy to communicate upper floor stepbacks to ensure access to sunlight on Princess Street, and to provide a predominantly human-scale, midrise streetscape.
  - d. Continuing to provide mitigation for transitions to adjacent residential neighbourhoods, but with a recognition that intensification and redevelopment will bring change and that some level of impact on adjacent land uses is reasonable to expect for the City's main corridor for growth (Princess Street). Intensification and redevelopment of the City's urban core supports a number of public interest goals including climate change mitigation through reduced energy use/emissions, housing availability and affordability, an enhanced pedestrian experience on

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Princess Street, and the establishment of a vibrant mixed-use transportation corridor.

- e. 6-storey height maximums for the majority of the corridor.
- f. Additional height permissions at the Division Street end of the corridor, up to a maximum of 20 storeys, with a 6-storey podium and the additional height portion limited to a maximum taller building floorplate of 790 square metres/8500 square feet (see map).
- g. Residential density limit of 210 units/hectare except where towers are constructed when 480 units/hectare is the limit.
- h. Including lands at the northwest and southwest corners of Princess Street and Division Street within the Williamsville Main Street corridor.
- i. Including new permitted uses within the C4 zone for the corridor that are appropriate for the area, such as clinic and office uses.
- j. Include a new approach to parking minimums and maximums to support Council's Climate Emergency objectives as well as related affordability, transportation modal-shift, construction flexibility/viability and built form objectives, as outlined in this report.
- k. In future, consider increasing height and density permissions for the section of the Corridor between MacDonnell Street and Bath Road/Concession Street as planning and transportation studies are completed and infrastructure capacity becomes available. Create a "North Hub" at the Kingston Centre.

In support of the applications, the applicant has submitted the following:

- Addendum to the Williamsville Main Street Study, including the Transportation Report, Servicing Memo, and Pro Forma Analysis for the corridor (Exhibit K);
- Draft Official Plan Amendment;
- Draft Zoning By-Law Amendment;
- Public Correspondence regarding the July 24, 2020 draft of the Addendum to the Williamsville Main Street Study (Exhibit I); and
- A comment and response matrix regarding feedback about the July 24, 2020 draft of the Addendum to the Williamsville Main Street Study (Exhibit J).

All submission materials are available online through the Development and Services Hub (DASH) at the following link, [DASH](#), using "Look-up a Specific Address". The subject

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applications can be found by searching the City Hall address of 216 Ontario Street, or by searching file number D35-003-2020.

Based on the feedback, and many points of contact that staff have had with members of the community, there are a number of items being requested or eliciting concerns that are outside the scope of this application, since they are not governed by the *Planning Act* or the *Ontario Heritage Act*. These items require coordination with other departments and will be subject to additional public consultation in future. This includes issues such as: transportation improvements within the Williamsville Main Street corridor (i.e. wider sidewalks for pedestrians; adequate amenities for transit users); green streets – how these are defined and how they could be implemented in Williamsville; opportunities and space to plant street trees and provide other amenities, such as benches for pedestrians; and acquisition of new open/green spaces along the corridor.

### **Other Applications**

This is a City-initiated amendment to the Official Plan and Zoning By-Law Number 8499. There are no other City-initiated amendments for the Williamsville Main Street area. However, there are several site-specific development applications with the study area that have been initiated by private property owners. These individual applications can be viewed through the City's online Development and Services Hub (DASH) at [www.cityofkingston.ca/dash](http://www.cityofkingston.ca/dash).

### **Provincial Policy Statement**

The Provincial Policy Statement (2020) provides policy direction on matters of provincial interest related to land use planning and development, which are intended to be complemented by local policies addressing local interests. Under Section 3 of the *Planning Act*, all municipal decisions regarding planning matters “shall be consistent with” applicable provincial policy.

The new 2020 Provincial Policy Statement came into effect on May 1, 2020. Staff have reviewed the changes and note increased support for the general direction of the work for the Williamsville Main Street, particularly related to intensification and transit-supportive development, and preparing for a changing climate. A detailed evaluation of the proposal against the applicable policies of the Provincial Policy Statement is included in Exhibit E.

The changes proposed through Official Plan and zoning by-law amendments for the update to the Williamsville Main Street Study are consistent with provincial policy.

### **Official Plan Considerations**

The subject property is designated Main Street Commercial on Schedule 3-A in the Official Plan (Exhibit D) and is also shown on Schedule PS-1 and is part of the Princess Street Corridor Specific Policy Area, Williamsville Main Street (WMS). The Princess Street Corridor Specific Policy Area for the WMS in Section 10E.1 of the Official Plan recognizes the vision for the corridor as a vibrant and active intensifying area with a mix of housing types and land uses framing an improved, pedestrian-oriented streetscape.

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The application is proposing changes and updates to the existing Official Plan policies and schedules. The revised Official Plan policies are provided as Appendix D in the Addendum attached as Exhibit K to this report. A draft by-law for the required Official Plan Amendment is provided as Exhibit A to this report. A detailed review of the applicable policies is attached in Exhibit G.

The changes proposed through Official Plan and zoning by-law amendments for the update to the Williamsville Main Street Study conform to the Official Plan.

### **Zoning By-Law Considerations**

Most of the lands within the Williamsville Main Street corridor have been zoned as the Williamsville Main Street Commercial Zone “C4-H (T1)” in Zoning By-Law Number 8499 (Exhibit H). The C4 Zone permits a number of different land uses and provides detailed performance standards that control the height, massing, and location of buildings. In general, a stepped building up to a maximum height of 6 storeys can be accommodated within the as-of-right zoning permissions, with a 3 to 4-storey streetwall height. The Official Plan policies that work with these provisions direct a 45 degree angular plane from all lot lines, and allow for consideration of buildings up to 10 storeys in height where a certain lot depth can be met.

The C4 Zone also requires a minimum 1.0 metre front yard setback, a minimum rear yard setback of 8.0 metres, and minimum setback of 8.0 metres for a side or rear yard adjacent to a residential zone. The additional requirement for an 8.0-metre minimum side or rear yard setback was introduced in 2017. The original provisions did not consider that Zoning By-Law Number 8499 does not have a definition of an exterior side yard, meaning that all corner lots have two front yards and two interior side yards, but no rear yard. The change was intended to clarify the 8.0-metre setback, especially where adjacent to a residential neighbourhood.

The parking and amenity area provisions of Section 5 of Zoning By-Law Number 8499 apply to the C4 Zone, with the exception that parking is not permitted in a front yard abutting a streetline and a minimum of 10 square metres of amenity area is required for each dwelling unit on a lot.

The application is proposing changes and updates to the existing zoning by-law provisions and schedules. The revised zoning provisions are provided as Appendix E in the Addendum attached as Exhibit K to this report. The draft by-law for the proposed Zoning By-Law amendment is provided as Exhibit B to this report.

The details regarding the review of the built form zoning provisions are contained in the Addendum (Exhibit K). The following is a summary of the key changes that have been made to the C4 Zone for the Williamsville Main Street:

- Permitted Uses: Some of the outdated uses that had been carried over the old C Zone of Zoning By-Law Number 8499 have been removed (i.e. sanitoriums). Instead, additional uses in keeping with the current uses along the main street, and those envisioned by the Study, have been better articulated in the list of permitted uses.



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- **Definitions:** Additional definitions have been added to the C4 Zone to explain built form elements and to define lot lines more clearly in the study area, which has a very irregular lot fabric.
- **Height:** The majority of the corridor is limited to a maximum of six storeys with a three to four-storey streetwall. The area around Princess and Division Streets has been identified as a location for greater height and density, with up to a 14-storey tower permitted over the six-storey podium, for a total of 20 storeys in only this location.
- **Density:** Staff are recommending a maximum residential density of 210 units/hectare for the study area, with an increase in the maximum residential density to 480 units/hectare when a tower is constructed. The purpose of this limit is to support the distribution of servicing capacity throughout the corridor, and to ensure that individual projects are not able to claim servicing capacity such that development of adjacent lands would be prohibited or unduly impacted. The limits are included in the zoning provisions to ensure that staff have the ability to recommend variances where appropriate. This is because residential densities measured in units per hectare are not an exact science, and the specific configuration of a building can greatly impact the calculation. The intent is to ensure that density limits support the appropriate build-out of the corridor without an undue focus on the specific number.
- **Setbacks and Stepbacks:** The previous angular plane provisions were problematic because of the irregular lot fabric. Instead, greater details regarding setbacks and stepbacks for upper storeys have been included in the C4 Zone. This includes increased setbacks along street frontages to allow for more space for pedestrians and amenities such as street trees, street furniture, etc.
- **Lot Coverage:** A maximum lot coverage of 70 percent has been included in the C4 Zone. In addition to complementing the other provisions controlling the built form of new development, the provision for maximum lot coverage will also provide direction to the market about the expectations for the development of properties (i.e. 100 percent of a property cannot be covered in buildings).
- **Balconies:** As part of the revisions to the zoning, staff discussed the inclusion and design of balconies in the main street area. The review included: differences in provisions that might be needed for balconies on the front of buildings versus the rear; the depth of balconies (interior depth versus projection) relative to usability; concerns about the design of balconies negatively impacting the massing of a building; and, the need to ensure useable amenity space. Staff recognize that there have been concerns raised about balconies at the rear of buildings potentially over-looking existing residential areas, but the provision of this outdoor amenity area is an important livability component in successfully integrating higher density residential development in a main street setting. For the purposes of the revisions to the C4 Zone, balconies that project out from the face of a building will be permitted above the fourth floor of building facing a street to a maximum depth of 1.5 metres, and balconies facing a lot line that is not a street, will be

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permitted above the second storey to a maximum depth of 2.0 metres. Staff will monitor the length and area of balconies of future development proposals to see if they are impacting the intent of the built form for the area, and will recommend additional regulations in the future, if needed.

- **Ground Floor Conditions:** The locations where ground floor commercial uses are required are not recommended to change from what was previously in place. The updated C4 Zone schedule clearly identifies the locations where ground floor commercial uses are required. The provisions also require the commercial uses, where required, to cover the entire street frontage of the first storey (excluding lobbies and entrances for permitted residential uses). The zoning requires all first storeys to be constructed to a minimum height of 4.5 metres even if initially for residential use, to permit future conversions to commercial uses. The definition of first storey included in the revisions to the C4 Zone indicate that it is the floor closest to finished grade and will exclude any floor of a building located below finished grade.

Where there may be a proposal for a single-use ground floor retailer, policies have been included in the revisions to the Official Plan policies for the Williamsville Main Street that require the frontage to remain an active part of the streetscape. This would include providing liner shops – small store frontages that would line the majority of the frontage with the exception of the entrance of the major retailer – and would prevent building elements that would impact the pedestrian experience at the ground level, such as blank walls, opaque glass, and the installation of lifestyle panels depicting photos and images for the retailer.

- **Mechanical Penthouses, Green Roofs & Other Rooftop Elements:** Mechanical penthouses and other rooftop mechanical equipment are permitted to exceed maximum height limits by 3.5 metres, and are not considered an additional building storey. Additional provisions have been added to control the area of these units and how far they are set back from the edge of a roof. Additional provisions have also been added to establish that all architectural appurtenances that support green roofs (e.g. garden sheds, shade structures), other rooftop sustainability elements (i.e. solar panels), or rooftop amenity spaces are permitted to exceed the maximum allowable building height by 3.5 metres.
- **Tower Provisions:** Provisions have been included for towers, in the limited area where buildings taller than six storeys are permitted. This includes a maximum floor plate of 790 square metres and a separation distance from other towers of 25 metres and no closer than 12.5 metres from an adjacent property line. However, where an adjacent property has already been developed with a tower, the tower for the subject property is permitted to be located closer than 12.5 metres to the shared lot line, so long as the 25-metre tower separation distance is maintained.
- **Parking Spaces:** The revisions to the C4 Zone for the Williamsville Main Street Study include the recommendation of a reduction in the required number of parking spaces for

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residential uses, including a proposed Official Plan policy which would allow for a further reduction to be considered through a minor variance application if supported by a qualified professional. The required number of parking spaces for non-residential uses is proposed to remain unchanged at this time, however, a similar proposed Official Plan policy would allow for a reduction should it be properly supported as well. Please see the discussion below following the transportation analysis for further details regarding parking.

- **Loading Spaces:** Details regarding required loading spaces has been added to the C4 zone for both commercial and residential uses. For commercial uses, one loading space would be required for developments with more than 300 square metres up to 2,500 square metres; two loading spaces would be required for developments with more than 2,500 square metres up to 7,500 square metres.
- **Accessory Buildings:** Provisions for location and size of accessory structures have been included with the C4 Zone that are similar to other accessory use provisions in Zoning By-Law Number 8499.
- **Transition Clauses:** The transition clauses have been updated to reflect permission given and applications received prior to the update to the Williamsville Main Street Study.
- **Holding Symbol:** Details have been added to the C4 Zone for the Holding Symbol that is included in the zoning. The provisions specify that it is directly related to potential servicing constraints in the main street area. The provisions have been included to clarify the intent of the holding symbol and permitted uses in the interim. It is expected that the holding symbol will remain in place until after the completion of the next phase of the Princess Street reconstruction from Division Street to Alfred Street.

## Discussion Items

The following sub-sections address some of the broader issues that were touched on as part of this review of the original Study. Details regarding specific public feedback about the July 24, 2020 draft addendum to the Williamsville Main Street Study are addressed later in this report.

### 1. Things That We Could Have Been Clearer About

After reviewing feedback from the public about the review of the Williamsville Main Street Study, it became apparent to staff that we could have been clearer about some of the intentions and detail about the review earlier in the process.

- a) The review of the Study, and the proposed amendments, at this time are only intended to address the issues raised in the interim control by-law (ICBL).

The review initiated by the ICBL had two specific purposes: (1) to review and clarify the appropriate locations for buildings taller than six storeys; and (2) to review the angular plane provisions and other zoning provisions related to built form. Where changes to built

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form provisions can have positive impacts on the public realm (e.g. increased setbacks along Princess Street and other street frontages), then staff have been able to incorporate those changes with the proposed amendments. Some additional issues raised through the process are being addressed where necessary and strategically viable, such as addressing parking requirements.

There are other aspects of the original Study that the public have expressed interest in seeing revised, clarified, or brought forward, it is not possible to address all of the issues identified by the public as requiring review through the update to the Study.

- b) This is a City-initiated review of the Official Plan policies and zoning provisions, which is not the same thing as a site-specific planning application submitted by a private property owner.

When the City undertakes a land use planning study for an area like the Williamsville Main Street, there are broader public interest goals that are the key consideration for the review. As part of these City-initiated projects, the City inevitably receives comments and requests from private property owners about changes they would like to see that would specifically benefit their properties. While some of the requests and suggestions are in line with the outcomes of the Study and staff recommendations, others are not. At the end of the process, when the City proposes amendments to specific planning documents, it is done with the intent of ensuring good land use planning and public interest outcomes. Where a request to include a site-specific change is not adopted as part of a City-initiated amendment, the owners of these properties have the same ability as prior to the Study to apply for their own individual permissions.

While part of the intent of the review of the Study is to support the redevelopment of the Williamsville Main Street, the final changes to the Official Plan policies and zoning are intended to ensure that development proceeds in accordance with the intended vision for the area. Site-specific requests and changes are always a possibility, but where they propose changes that are not in keeping with the policy framework put forward by the City, then a separate application and review process with public consultation is the more appropriate means of addressing those proposals.

- c) The use of the term “corridor” in the Addendum and the staff report is not intended to imply that the movement of vehicles is the most important function of the study area. Similarly, the use of the name “Williamsville” does not mean that these policies apply throughout the Williamsville neighbourhood, but rather to the section of Princess Street that borders Williamsville.

In the City’s Official Plan, Schedule 2 identifies Princess Street as a “Corridor”. Section 2.2.7 of the Official Plan describes both Centres and Corridors as follows:

“The City’s existing Centres and Corridors, as shown on Schedule 2, are areas of mixed-use and mixed buildings, including employment, residential, commercial and supporting uses and facilities. These will be the areas where intensification will be focused, and

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where greater densities of residential and non-residential development will be permitted. Corridors are identified as those areas that provide linkages between Centres and are accordingly well-suited to accommodate priority transit and a mix of uses that promote active transportation.”

Therefore, while a Corridor does serve an important role for connectivity and movement, it is intended for a variety of modes of transportation, and in the case of a main street setting, it is also a place to live, work, shop, and linger. It is this broader definition of “Corridor” that staff are referring to when using the term in the Addendum and staff report for the update to the Williamsville Main Street Study.

- d) The economic feasibility report by Watson and Associates noted that six-storey developments are not viable, but only under the current zoning framework.

The report by Watson and Associates did not indicate that all six-storey development is not feasible, it concluded that viability is a challenge under the current detailed zoning requirements. Therefore, staff are proposing changes to provide certainty about permissions, which in turn is expected to support timing of approvals, while considering reduced requirements where reasonable. Staff have heard from previous consultations with industry stakeholders that small changes (i.e. more certainty, less parking, fewer studies, etc.) can greatly support the viability of a project, especially when taken all together.

## **2. A Note on Perspectives on Height in the Kingston Community**

Throughout the community consultation there has been significant focus on the height of buildings. This is consistent with what staff have seen across the municipality, as the engaged community City-wide is often primarily interested in the height of buildings. Height is one of 17 urban design elements on which the City’s Density by Design project team is concurrently consulting. Yet in Kingston, the discussion on development proposals at times disproportionately focuses on building height.

The commonly conveyed concern/opinion regarding height in Kingston appears to be twofold:

- Tall buildings, which were physically impossible before a certain date, are incongruent with the heritage landscape of 1800s downtown Kingston; and
- Tall buildings can have a negative effect on the landscape and interrupt views; this idea is sometimes accompanied by a belief that Kingston should remain a small-sized City without the characteristics and landmarks of a larger urban environment.

Planning Services does not have detailed information about what proportion of the overall Kingston community shares these views, since participation in planning processes are voluntary and often limited in numbers. More recently, Planning Services staff have been working with the Communications and Customer Experience Department to improve the accessibility and reach of consultation exercises. The Height Mapping Exercise on Get Involved Kingston for the

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Density by Design project is one example (refer to the “Public Comment” section below for more details). In general, Planning Staff have a broad goal to expand the conversation about building design and appropriate development beyond just a discussion on height, to include consideration of all inter-related elements of good building design in various location contexts of the city, always in the context of larger public interest goals and directions from Council, including but not limited to the Declaration of a Climate Emergency.

### 3. Heritage Character and Built Heritage Resources

Conservation of heritage resources is a key consideration for any planning policy work in the City of Kingston, and existing built heritage resources have been examined in detail for the Williamsville Main Street. Thus far, this work has focused on individual buildings based on era of construction (pre-1940) and current condition (few modifications over time).

Planning for the conservation of cultural heritage resources is governed by the *Planning Act* together with the *Ontario Heritage Act*. Increasingly, Planning Services is adopting a more inclusive view of heritage conservation and broadening the scope of what is considered when identifying the City’s heritage resources. Cultural Services is supporting this work with the expertise already available in that department and its years of experience with broader considerations of cultural heritage such as museum and educational programming and community consultations on issues related to community identity. This is critical work at a time when intolerance, inequality and bigotry is still a daily struggle within our communities.

Many consider heritage to refer to older, picturesque buildings. In fact, a heritage building is different from a historic building. Heritage can be anything identified as having cultural heritage value or interest by a community. It refers to what is inherited through generations, and it is a key element of who we are as a group of people. It includes concepts, practices and beliefs passed down through generations and shared among current communities.

When we talk about heritage value, we are also talking about community values. Our shared cultural heritage impacts how we see ourselves and what we collectively believe. It impacts how we relate to one another and how our communities look and feel to live in. Other possible approaches include cultural heritage landscapes and “intangible heritage”, which is place-based identification of community stories and naming, local cultural narratives and/or customs.

As part of the background work for the Study, a Heritage Character statement was drafted which states: “The Williamsville Study area is a linear mixed-use district with land uses and built form largely determined by the evolving nature of Princess Street.” Character defining elements include:

- Remaining stone, frame, and brick house-form buildings;
- Remaining stone, brick and frame commercial and mixed-use terraces;
- Examples of automobile dealerships, service stations and motels; and

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- Patterns of streets and blocks determined by the juxtaposition of the Princess Street axis and the municipal street grid.

The Williamsville area is currently undergoing significant development interest as this section of Princess Street continues to evolve. Princess Street is identified in the Official Plan as the focus for intensification in the City, and as an important transportation corridor. Much of the work of the Study focuses on improving the streetscape and pedestrian experience to support walkability, active transportation, and transit use, while maintaining the character of the area.

Due to the character of the area being based on its evolving nature, the Study did not identify a specific heritage character for the area beyond protecting existing heritage resources. The character defining elements included land uses that are no longer desirable in its current context, such as automobile dealerships and service stations. Existing single-family dwellings along Princess Street can present a challenge for adaptive reuse to commercial uses and underutilize a site within an area intended for intensification. Additionally, several of these dwellings have a minimal setback from Princess Street, leaving few options for an improved and widened pedestrian realm. It is important to balance goals to maintain the character of the area with the opportunity presented by the Williamsville corridor to accommodate some of the City's much-needed residential intensification.

The heritage work conducted for the Study provided recommendations related to identification and conservation of specific properties with Princess Street frontage but did not consider impacts to built heritage resources adjacent to Princess Street in the side streets off the corridor. Because these areas are now undergoing additional development pressure due to the growth in the corridor, the city's Heritage Properties Working Group is undertaking work to identify additional heritage resources in the surrounding neighbourhoods, and staff expect to recommend to Heritage Kingston and Council that additional properties be afforded protection under the *Ontario Heritage Act* in early 2021.

#### **4. Affordability**

While the Williamsville Main Street has historically provided relatively affordable housing options, recent investments and redevelopment are putting upward pressure on costs. The Williamsville neighbourhood has been subject to gentrification for some time, but the pace of change seems to have increased.

Affordability initiatives at the Provincial level include new direction and options for municipalities. Permission for second residential units has resulted in a sharp uptake in their construction, with Building Permits issued for 105 second residential units as of October 31, 2020. In 2019, 33 permits were issued for second units, with approximately 100 permits issued over the last 5 years.

More recently, the new Provincial Policy Statement 2020 changed the direction for second residential units to "additional residential units", indicating that municipalities must consider allowing three units as-of-right. Planning Services is undertaking detailed analysis in coordination with Utilities Kingston to determine servicing capacity impacts for this change.

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While additional residential units are typically associated with low rise forms of development, another possible Provincial tool is Inclusionary Zoning, which can require affordable residential units to be included in a multi-residential development. This is the form of development most likely to continue along the Williamsville Main Street, providing a greater range of forms of housing within the mostly low-rise Williamsville neighbourhood. However, in 2019, the Province passed changes to the *Planning Act* related to Inclusionary Zoning in the *More Homes, More Choice Act* in 2019, which were previously detailed in [Report Number 19-156](#). The changes have a significant impact on Inclusionary Zoning in Kingston, as the changes restrict the application of this affordable housing tool only to those municipalities that are prescribed by the Minister of Municipal Affairs and Housing, or those municipalities who can scope the application of Inclusionary Zoning policies to areas within a protected major transit station area or a community planning permit system. At this time, Kingston does not meet any of the criteria required by the *Planning Act*, since there are currently no municipalities prescribed by the Minister and it does not have a protected major transit station or a community planning permit system as defined by the *Planning Act*.

Planning Services is working with Housing and Social Services to support and encourage affordable housing options City-wide, including in the Williamsville Main Street. Our groups work with a spectrum of affordability that includes affordability based on various definitions, as well as types of supportive housing options. Community Improvement Plans for affordable housing are another relatively new Provincial tool that staff are monitoring.

## 5. Transportation Analysis

As part of the updated scope for the Williamsville Main Street Study, a transportation network assessment was completed for the area to review the network's existing performance and assess how the network would perform under future development scenarios. This analysis considered all modes of travel including active transportation, transit, and vehicular and utilized updated population, employment, and neighbourhood travel information to test network performance. The assessment considered capacity, impact on travel times, potential for vehicles to infiltrate the adjacent residential areas, and intersection operation.

The analysis concluded that the network could accommodate the additional traffic associated with the existing and active/approved developments within the Williamsville Main Street well without any optimization or changes to the infrastructure in place. The network can accommodate the near-term growth linked with the active/approved developments as the residential growth is expected to generate a relatively low number of auto trips.

The longer-term ultimate growth scenarios envisioned for the area do create issues within the transportation network during the weekday PM peak hour that will require optimization and changes to the existing infrastructure. The vehicle trips associated with the ultimate growth scenario does have an impact on the road network and results in increased travel times, delays, queuing, as well as traffic infiltration through the residential areas.



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These findings are key to the next steps of the transportation analysis as it confirms that the policy direction for the area and the City, that is to prioritize active and transit users ahead of vehicles, can be undertaken. Only in the longer-term growth scenarios are there issues that begin to develop for vehicles that may warrant intervention.

The residential growth in Williamsville, both in the near and long-term, is expected to have very high active and transit mode shares, even relative to the existing high non-auto trips. Improvements to active transportation and transit facilities are key to maintaining the low auto mode share, which is critical to maintaining the viability of the Williamsville transportation network without expanding roadway for vehicles.

As the right-of-way width for the Princess Street corridor in this segment is narrow, it is not possible for Princess Street to simultaneously be a transit priority corridor, a cycling spine route, a pedestrian-friendly corridor, and an high volume, vehicle-centric roadway leading to the downtown core. Therefore, compromises will need to be made in the future that improves multi-modal mobility but recognizes the limited space to accommodate all modes of travel in a narrow corridor. These details will be explored further in the next stage of the study however given the constraints; the long-term design of the Princess Street corridor may need to:

- Remove some or all existing turning lanes at intersections;
- Restrict some or all, existing turning movements at all intersections;
- Remove existing on-street parking and preclude the additional of any new on-street parking in the future;
- Limit the dedicated buffered cycling lanes along the corridor and explore alternate routes.

The next steps for the transportation study are to identify the preferred role, function, and cross-section for Princess Street and the surrounding network to support the travel needs of the neighbourhood and the City. This stage of the study will identify options, particularly as it relates to pedestrians and transit, to ensure that the transportation network can accommodate the long-term growth.

This work will include additional public consultation and will continue through 2020 and 2021 with the development of an updated conceptual cross section for Princess Street from Bath Road to Division Street that will identify the pedestrian and transit elements to be included moving forward. This work will also include more detailed study of the Princess Street intersections to ensure that pedestrian and transit priority is incorporated along the corridor. Elements of the public realm design included in the original WMSS will be reviewed for applicability in the conceptual cross section.

One element of the public realm design identifies a desire for “Green Streets” to be developed for Albert Street, Frontenac Street, and/or Alfred Street. The WMSS describes a green street as significant tree-lined corridors, which create important visual links and enhance pedestrian and cyclist connections between areas within and surrounding the Williamsville Princess Street corridor. Although the transportation analysis will not include detailed conceptual design work for the north-south streets that cross Princess Streets, the work will inform the intersection design

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and identify how the north-south streets will function in the long-term transportation network. This will provide a basis to develop the conceptual approach for green streets in the future.

Completion of the Princess Street and intersection transportation analysis will then allow for the detailed design of the Princess Street segment from Alfred Street to Division Street to be completed for planned reconstruction. Detailed design of other sections of Princess Street or the associated side streets, including those identified as future green streets, is not planned at this time but would be scheduled pending future reconstruction work.

## 6. Parking

Throughout the Williamsville work program, the issue of parking supply has come up many times in many different contexts. It is widely recognized that the amount of parking constructed within projects has a significant impact on construction costs; housing and transportation affordability; vehicle traffic generation; mobility mode shift to walking, biking and public transit; public and private infrastructure costs; greenhouse gas (GHG) emissions and climate emergency implications; air pollution and public health implications; public safety relative to vehicle-involved collisions; built form and density; overall project viability; and more.

In particular, there has been a strong need since Council's leadership in passing Ontario's first municipal Climate Emergency Declaration, to ensure that the City's land-use and transportation approaches reflect that Council leadership, and are fully aligned and working to significantly mitigate our climate change impacts. Given how influential parking supply is in both land use and transportation contexts, this represents a significant opportunity to advance both our real actions to address the Climate Crisis, and our corporate knowledge around a true alignment of land-use and transportation decision-making.

Staff have observed two key trends relating to parking supply in the context of applications along the Williamsville Corridor in recent years. First, many applications have requested reductions to the standard minimum parking required in the city zoning by-law, with 0.5 parking spaces per unit being a typical reduction request. These requests have been supported by staff and approved by Council but can represent a somewhat repetitive discussion during the application process. Second, some other applicants have proposed a high number of parking spaces that staff have considered excessive considering Council's priorities relating to the climate emergency, affordability, and other key public interest issues, resulting in debate and negotiations between staff and applicants that can add time and cost to the process for all parties.

In the case of both of these observed trends, Staff believe that all parties would benefit from clarity around the City's evolving intentions around parking requirements as an extremely important lever/tool in contributing to many of the City's key public interest goals. New parking minimums, and potentially new parking maximums in specific locations, are being considered in the context of the City's new zoning by-law project through the completion of a comprehensive Parking Standards Study. The Parking Standards Study will be the subject of a Discussion Paper presented to Planning Committee in early to mid 2021, and feedback received from the

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public, key stakeholders and members of Council in response to the proposed standards will inform Staff's approach to parking in the second draft of the new zoning by-law. The second draft of the new zoning by-law is anticipated to be released to the public in mid 2021 for public consultation.

In the meantime however, the Williamsville Main Street represents a strategic location to require a consistent and predictable reduced number of residential parking spaces, with a pathway in the proposed Official Plan policy to further reduce the requirement through a minor variance application with an associated public process. This reduction is being recommended by Staff in light of the trends/observations discussed above; the highly urban and multi-modal nature of the corridor; the challenges around project viability discussed elsewhere in this report (that less parking-related costs can assist with); and other public interest reasons. Establishing a lower requirement for residential spaces in the Williamsville Main Street provides an opportunity to establish a forward-thinking provision that will help to meet Official Plan policies and Council priorities focused on active transportation, promoting transit and reducing the need for vehicles in areas that are well located in mixed-use areas as far as daily needs are concerned. This forward thinking approach will act as an interim placeholder until the new zoning by-law is complete near the end of 2021, at which time staff would have an opportunity to revisit the required parking standards. If there is not enough data between now and the adoption of the new zoning by-law to determine if the reduced number of residential parking spaces is sufficient, staff have the opportunity to report back to Council at a future point in time and revise the new zoning by-law accordingly.

Several cities across Canada and North America are in the process of reviewing the business-as-usual approach to parking minimums and maximums, recognizing how powerful such tools can be in achieving larger city goals. Recently, the City of Edmonton, Alberta removed their parking minimums city-wide for all land uses, and even more recently the City of Calgary voted to remove parking minimums for non-residential uses (a similar removal of residential parking minimums city-wide is expected to come forward shortly). Removing or significantly reducing parking minimums is particularly effective in cities where the market, or at least some projects, would prefer the flexibility to provide less parking without having to create special parking requirements on a case-by-case rezoning basis. It is recognized however that providing a reduced minimum, or no parking minimum at all, does not prevent developers from still providing additional parking, or even excessive parking – it is merely establishing the fewest number of spaces that are required to be provided. In cities where the trend is to generally provide a large amount of parking based on the developer's perceived demand by future purchasers or tenants of the building, a removal or reduction in the minimum number of parking spaces can end up having minimal effect on the amount of actual parking constructed. When combined with parking maximums, however, cities can provide flexibility where less parking is considered viable, while preventing excessive amounts of parking in keeping with city priorities such as affordability and climate crisis mitigation.

Based on our City's priorities, as well as the specific observations in the Williamsville Main Street, staff recommend a reduction in the minimum number of residential parking spaces from the current requirement to 0.4 spaces per residential unit, representing a 20% reduction in what

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we have typically approved in Williamsville through past site-specific zoning by-law amendments, with no additional burden placed on the public parking supply to provide off-street, long-term parking spaces. No pre-established reduction is initially proposed for non-residential parking spaces at this time, as this will be reviewed comprehensively through the city's new zoning by-law project. We expect that many projects will still provide parking in excess of the minimum requirements, and they will have the flexibility to determine how much they require. However, in order to ensure that the additional parking provided by developers isn't excessive given the locational attributes of Williamsville relative to policies seeking to balance the need for vehicular trips with active modes of transportation and transit, Staff also recommend a new parking maximum of 1.0 spaces per residential unit to avoid proposals for excessive parking that are inconsistent with the many related goals and objectives of the city. The intent is that adjustments to these requirements would be contemplated through a minor variance process, and that approach is reflected in the proposed Official Plan policies.

In considering how high such a parking maximum should be, staff have considered the cases over the last several years where staff raised a concern with applicants regarding excessive proposed parking, leading to protracted discussions. Generally, such discussions occurred when parking was proposed in excess of one parking space per unit within the Williamsville Main Street. Given this, to be consistent as an initial starting point during this trial period prior to the enactment of the new zoning by-law, a maximum parking requirement of one space per unit is proposed. Note that no parking maximum is proposed for non-residential space.

Given that both the proposed parking minimum and parking maximum reflect previous positions taken by staff on a case-by-case basis in the Williamsville Main Street over the last few years, it is anticipated that establishing such a minimum and maximum will save staff and applicants negotiation time and associated costs as a result of the clarity provided, and will also ensure that the parking provided on individual properties is both sufficient to meet the anticipated demand and also forward thinking to ensure that parking is not over-supplied to the detriment of active transportation, transit, climate change, affordable housing and many other important policies and strategic priorities identified throughout this report.

Given that staff do not anticipate that many projects will take full advantage of the parking minimum and most will provide somewhere mid-range between the minimum and maximum, and further given the opportunities for walking, biking and public transit-riding that exist in the corridor, staff do not expect local parking issues or problems to arise in the context of either individual or cumulative projects. However, as part of the reduced residential parking changes, staff will observe and monitor the situation and will advise Council if parking-related issues arise and, if necessary, in advance of the completion of the new zoning by-law, may bring adjustments to the parking approach if deemed necessary by staff or directed by Council. Staff are not planning any public parking policy changes to support these on-site parking requirements and would not recommend changes to support a specific application.

Note that if staff is found to have under-estimated the interest in low ratio parking buildings, that in and of itself would not be considered a "parking issue," given that such a possibility is certainly anticipated and would not be cause for concern; only observable parking-related

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problems that exceed observed or anticipated public interest benefits would be considered cause for action or adjustment.

As an additional public interest aspiration, all parking that is constructed within the Williamsville Main Street will be encouraged to be designed and built in a manner that allows for flexible adaptation to other uses as parking space demand is reduced over time, noting that spaces can be removed or transformed when not needed given that the City may eventually move to remove the minimum parking requirement altogether, if it is found that the reduced minimum ratio is still too high, or if more flexibility is deemed publically advantageous. The City will continue to investigate ways to support and facilitate such flexible design approaches, as learning from other cities and contexts grows over time.

## **7. Infrastructure Servicing Capacity**

Planning Services is working with Utilities Kingston to obtain detailed servicing capacity information for many areas of the City, to ensure sufficient capacity is available to support both the current and future development activity within the Williamsville Main Street. A summary of the infrastructure requirements is provided below.

### **Sanitary Sewer Service**

Utilities Kingston has advised that recent upgrades include reconstruction and sewer separation from Drayton Avenue to MacDonnell Street, as well as a section of Frontenac Street in support of the original Williamsville Main Street Study. Further recent upgrades took place on Alfred and Elm Streets, creating infrastructure capacity to support 1200 people in addition to what has already been approved through the development review process. Additional improvements are planned for the section of Princess Street from Division Street to Alfred Street in 2022 to alleviate remaining capacity concerns with the sanitary sewer network (combined sewer separation).

Utilities Kingston has confirmed that it will be necessary to maintain the current Holding Symbol in the zoning by-law for certain properties until such time as the construction contract to implement the capital upgrades is executed whereupon the holding symbol can be removed. Once the Division Street to Alfred Street upgrade is complete, there will be sufficient capacity to support the additional growth of approximately 7,500 to 8,000 people proposed to be allocated to the Williamsville portion of the Princess Street corridor. The proposed population is discussed in greater detail in Section 3 of the Addendum.

Utilities Kingston has also advised that the sanitary sewer was rebuilt west of Macdonnell Street to Bath Road as part of the original Williamsville upgrade in 2014. The proposed allocation of new population to this area should not exceed the current permissions, as no further sanitary sewer capacity beyond this projection would be available for this section of Princess Street without reconstruction/replacement of the existing sanitary sewer.

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## Water Service

As part of the sanitary sewer reconstruction work undertaken in 2014 noted above, some watermains were also reconstructed. Utilities Kingston confirmed that the existing water infrastructure should provide sufficient capacity for the remaining unit projections proposed for the Williamsville corridor. The proposed allocations have been reviewed and raise no concerns relative to provision of potable water for typical design flows associated with domestic loadings.

Utilities Kingston has advised that the review of the water distribution system from the original Williamsville Main Street Study in 2011 indicated sufficient capacity for the estimated incremental loadings. It was noted in 2011 that multi-story developments may require on-site pump systems to provide adequate pressure and flow for domestic use on upper-level units. Similarly, on-site fire protection measures were identified as potentially being required. These requirements are not specific to Williamsville and depending on elevations and building height may be required at any location within UK's water distribution system. This should not be seen in any way as a servicing limitation from Utilities Kingston's perspective as there is sufficient pressure and flow on our system to service these developments, it just may necessitate additional measures by the developer depending on building height. However, each specific proposal will need to be evaluated on a case-by-case basis, during the planning approvals process.

In summary Utilities Kingston advised that the water distribution system for Williamsville should be sufficient for the projected population increase. Construction materials used during building construction can significantly change the fire flow requirements and the impacts on the water distribution system. Projects will be reviewed during the planning approvals process to assess associated construction methods in relation to the available water supply in areas such as Area "A" that present a higher risk for wood frame projects to ensure adequate water supply for fire fighting is provided.

Acknowledging the need for better definition on this issue, Utilities Kingston Engineering staff carried out a conceptual water modelling exercise on the water system to determine if any improvements would be required to support 6-storey wood frame buildings throughout the Williamsville area and reported results at the August 13 Public Meeting.

Since that time, Utilities Kingston has undertaken additional review activities to further assess the ability of the water system within the Williamsville Main Street Area to provide adequate "fire flows" where wood frame buildings are the preferred choice of construction. Please see Appendix J of the Addendum for more details.

## Gas Service

UK has advised that the existing gas supply and distribution infrastructure was sufficient to handle the estimated incremental loadings from the 2012 Williamsville Main Street Study. The existing system should be able to handle the additional units, but further review will be required at the site plan control application stage.

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## Electrical Service

UK has advised that currently, sufficient capacity exists within Kingston Hydro's distribution system to provide electrical service to the pending and approved developments within the Williamsville study area. Long-term, new developments will start to present challenges to the 5kV system, but sufficient capacity exists at higher voltage (44kv) connections. Early consultation with Kingston Hydro is recommended to be able to coordinate responses on any capacity related matters affecting the 5kv distribution, again on a site-specific basis. Utilities Kingston is currently engaging the Ontario Energy Board for approval of infrastructure upgrades to support intensification.

## 8. Study Area Boundary Review

Staff conducted a review of the boundaries for the Williamsville Main Street policies and provisions with the intent of rationalizing and harmonizing the boundaries in both documents. Proposed changes to the boundaries of the study area in both the Official Plan and zoning by-law are considered minor adjustments and were made based on the following criteria:

- There was a discrepancy between the existing Official Plan designation and zoning (i.e. a Residential designation and a commercial zone, or vice versa);
- The boundary of either the Official Plan designation and zoning, or both, cut through a property (and in a couple of cases a building) instead of following lot lines; and
- Including some additional small lots in the Main Street Commercial designation or C4-H (T1) Zone where the designation/zone was already on either side of the property and/or to line up with the designation/zone directly across the street from the subject property.

Appendix L outlines the proposed site-specific changes to the Official Plan designations and the C4-H (T1) Zone of Zoning By-Law Number 8499.

## Technical Analysis

These applications have been circulated to external agencies and internal departments for review and comment. All comments on the proposal have been addressed and no outstanding technical issues with these applications remain at this time.

## Public Comments

### Workshop

A public workshop about the update to the Williamsville Main Street Study was held on February 12, 2020. Details and public comments from that workshop were outlined in the Public Meeting Report for the Study update ([Report Number PC-20-028](#)). Feedback from the workshop was incorporated into the July 24, 2020 draft Addendum to the Study.

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**Height Mapping Exercise: Get Involved Kingston**

As part of the Density by Design consultation, Planning Services and Communications hosted an online application with an interactive map. On the map, community members could drop pins that corresponded to certain height ranges for buildings.

The Height Mapping exercise on Get Involved Kingston garnered the highest level of engagement in a City of Kingston consultation process (not just planning) in some time. A total of 1628 pins were dropped by 156 participants, and there were 838 visitors to the map. There were also 66 new registrations to our Get Involved platform, which hosted the exercise. The company that produces the platform, Bang the Table, was following participation levels in the exercise with excitement and advised that it was approximately five times the highest level of participation seen on their platform, worldwide.

Based on the Height Mapping exercise, there is a larger variety of opinions about the height of buildings across the community than previous consultation exercises had suggested. In the past, most of what staff heard were concerns about height. However, through Density by Design, as the project team engaged more and more members of the community, a clear lack of consensus emerged. For the first time, staff began to hear calls for taller buildings. Some respondents indicated that the skyline of Kingston when seen from the water is too insignificant, and that the City should be allowing 30 to 50 storey skyscrapers anywhere in the downtown core. Staff are aware that there are many others in the community that would strongly disagree with such a possibility, but the primary observation is that there are many perspectives on height.

Staff acknowledge that there are many more members of the community whose opinions have not yet been reached by the project team. Staff hope to hear those opinions soon, and will continue to find innovative, fun and convenient ways to gather input from the community on planning consultations. Staff are also working on new ways to report back on how community input is considered, and is reflected, not reflected or partially reflected in planning recommendations.

**Public Engagement About the Economic Feasibility Report**

On October 14, 2020, staff held an online Question & Answer event about the land economics work for the update to the Williamsville Main Street Study. There was a presentation and question and answer session with project team members including the land economist contracted for the study. A number of questions were asked by 20 registered participants and staff provided detailed information about the economic analysis as well as how that information is being used by planning services staff in developing policy recommendations.

**Public Meeting and Draft Addendum**

A Public Meeting regarding the draft Addendum to the Study was held on August 13, 2020. In addition to members of the public that spoke at the public meeting, staff have also received



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numerous pieces of written correspondence regarding the draft Addendum. All original public comments are available in Exhibit I of this report.

A comment and response matrix has been prepared to address comments received about the draft Addendum, which is included in Exhibit J of this report. The issues raised through the comment and response matrix have been addressed throughout the body of this report, and the following section summarizes the key changes made based on public input about draft Addendum.

### **Effect of Public Input on Draft By-Law**

A detailed summary of the public input received and responses from the project team is included as Exhibit J.

### **Conformity of Existing Zoning with Official Plan**

The Official Plan is the document in which the City of Kingston sets out its land use planning goals and policies that guide physical development, the protection of natural and cultural heritage, resource management and necessary supporting infrastructure. The Official Plan manages and directs change with high level policies that are meant to be implemented through other, more detailed and specific municipal by-laws, such as a zoning by-law. The zoning by-law is a separate document that is an implementation tool to put the Official Plan's general policies into specific requirements that can be measured and applied to individual properties across the City. Zoning by-laws must conform with the policies of the Official Plan, however, due to the nature of the Official Plan policies, it is important to note that there is typically more than one way for a zoning by-law to conform with the policies. The existing zoning by-law on the subject property conforms with the policies of the Official Plan and is being replaced with new zoning by-law provisions that also conform.

### **Conclusion**

The changes that are proposed through the Official Plan and zoning by-law amendments as part of the update to the Williamsville Main Street Study are intended to clarify where buildings taller than six storeys are permitted in the main street area. They also provide direction on the appropriate built form of future development, so that new buildings are compatible with surrounding land uses, and fulfill the vision for the area as a vibrant main street with services for the surrounding neighbourhoods and an increase in residential units.

The intent is to allow new development of the right scale and density in the right locations without the need for additional planning approvals. Where there is a proposal that meets the intent and purpose of the Official Plan policies and zoning, but may require relief from a specific provision, there is still the option of review of the proposal through the minor variance process.

Section 45(1.3) of the *Planning Act* usually puts in place a two-year moratorium on minor variances when a zoning by-law is passed. However, Section 45(1.2) of the *Planning Act* states that Subsection 1.3 applies when "a [zoning] by-law is amended in response to an application by

November 19, 2020

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the owner of any land, building or structure affected by the by-law, or in response to an application by a person authorized in writing by the owner". As such, the two-year moratorium on applications for a minor variance only applies to owner-initiated site-specific zoning by-law amendments. Staff have confirmed with the City's Legal Services Department that the proposed City-initiated zoning by-law amendment for the Williamsville Main Street would not restrict minor variance applications in the area affected by the amendment.

Based on the information presented in this report and the Addendum to the Williamsville Main Street Study, staff are recommending approval of the proposed Official Plan and zoning by-law amendments, as they are consistent with the PPS, conform to the Official Plan, and represent good land use planning.

**Existing Policy/By-Law:**

The proposed amendment was reviewed against the policies of the Province of Ontario and City of Kingston to ensure that the changes would be consistent with the Province's and the City's vision of development. The following documents were assessed:

**Provincial***Planning Act*

Provincial Policy Statement, 2020

**Municipal**

City of Kingston Official Plan

Zoning By-Law Number 8499

Williamsville Main Street Study (2012)

**Notice Provisions:**

A Public Meeting was held respecting these applications on August 13, 2020. Pursuant to the requirements of the *Planning Act*, a notice of the Statutory Public Meeting was provided by advertisement in The Kingston Whig-Standard 20 days in advance of the Public Meeting. A courtesy notice was also placed in The Kingston Whig-Standard on August 4, 2020

If the applications are approved, a Notice of Adoption and a Notice of Passing will be circulated in accordance with the provisions of the *Planning Act*.

At the time of the writing of this report, 21 pieces of correspondence have been received and all planning related matters have been addressed within the body of this report. Any correspondence received after the publishing of this report will be included as an addendum to the Planning Committee agenda.

November 19, 2020

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**Accessibility Considerations:**

None

**Financial Considerations:**

None

**Contacts:**

Andrea Gummo, Manager, Policy Planning, 613-546-4291 extension 3256

Sonya Bolton, Senior Planner 613-546-4291 extension 3237

**Other City of Kingston Staff Consulted:**

Jim Miller, Chief Operating Officer, Utilities Kingston

Ian Semple, Director, Transportation Services

Laura Flaherty, Project Manager, Planning Services

Sukriti Agarwal, Manager, Service Standards & Data Management

Tyler Lasko, Manager, Design & Development, Engineering Services

Meghan Robidoux, Planner, Planning Services

Genise Grant, Intermediate Planner, Planning Services

Chris Wicke, Senior Planner, Planning Services

James Bar, Senior Planner, Planning Services

Marissa Mascaro, Manager, Transportation Projects

Neal Unsworth, Manager, Parks Development

Chanda Sames, Parks & Open Space Planning Coordinator

**Exhibits Attached:**

Exhibit A Draft By-Law and Schedule A to Amend the Official Plan

Exhibit B Draft By-Law and Schedule A to Amend Zoning By-Law Number 8499

Exhibit C Key Map

November 19, 2020

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- Exhibit D Neighbourhood Context (2019)
- Exhibit E Consistency with the Provincial Policy Statement
- Exhibit F Official Plan, Land Use
- Exhibit G Conformity with the Official Plan
- Exhibit H Zoning By-Law Number 8499, Map 20
- Exhibit I Public Correspondence Regarding the July 24, 2020 Draft Addendum to the Williamsville Main Street Study
- Exhibit J Comment and Response Matrix for Public Feedback Regarding the July 24, 2020 Draft Addendum to the Williamsville Main Street Study
- Exhibit K Addendum to the Williamsville Main Street Study (with Appendices)

**By-Law Number 2020-XXX**

**A By-Law To Amend The City Of Kingston Official Plan (Amendment Number 71,  
Update to the Williamsville Main Street Study)**

**Passed:** [Meeting Date]

**Whereas** a Public Meeting was held regarding this amendment on August 13, 2020;

**Now Therefore** the Council of The Corporation of the City of Kingston, in accordance with the provisions of Section 17 of the *Planning Act*, R.S.O. 1990, c.P13, hereby enacts as follows:

1. The City of Kingston Official Plan is hereby amended by the following map changes, which shall constitute Amendment Number 71 to the Official Plan for the City of Kingston.
  - (a) **Amend** Schedule '3-A', 'Land Use', of the City of Kingston Official Plan, so as to re-designate the properties shown on Schedule 'A' to By-Law Number 2020-XX, from 'Central Business District' to 'Main Street Commercial'.
  - (b) **Amend** Schedule '3-A', 'Land Use', of the City of Kingston Official Plan, so as to re-designate the properties shown on Schedule 'B' to By-Law Number 2020-XX, from 'Residential' to 'Main Street Commercial'.
  - (c) **Amend** Schedule '3-A', 'Land Use', of the City of Kingston Official Plan, so as to re-designate the properties shown on Schedule 'C' to By-Law Number 2020-XX, from 'Main Street Commercial' to 'Residential'.
  - (d) **Amend** Schedule '3-A', 'Land Use', of the City of Kingston Official Plan, so as to re-designate the properties shown on Schedule 'D' to By-Law Number 2020-XX, from 'Residential' to 'Main Street Commercial'.
  - (e) **Amend** Schedule '3-A', 'Land Use', of the City of Kingston Official Plan, so as to re-designate the properties shown on Schedule 'E' to By-Law Number 2020-XX, from 'Residential' to 'Main Street Commercial'.
  - (f) **Amend** Schedule '3-A', 'Land Use', of the City of Kingston Official Plan, so as to re-designate the properties shown on Schedule 'F' to By-Law Number 2020-XX, from 'Residential' to 'Main Street Commercial'.
  - (g) **Delete** Schedule 'PS-1', 'Princess Street Corridor Specific Policy Area Williamsville Main Street', of the City of Kingston Official Plan, and **replace** it with a new version of Schedule 'PS-1', Princess Street Corridor Specific Policy Area Williamsville Main Street', as shown on Schedule 'G' to By-Law Number 2020-XX.

2. That the City of Kingston Official Plan, as amended, be further amended by including the following changes to Section 3.4.C 'Main Street Commercial':
  - (a) **Delete** Section 3.4.C.9 in its entirety and **replace** it with the following new Section 3.4.C.9: "New development within the Williamsville Main Street is directed by the Williamsville Main Street Study (2012) and Addendum (2020), which provide specific design direction and are further detailed in the policies for the Princess Street Corridor Specific Policy Area: Williamsville Main Street in Section 10E.1 of this Plan."
3. That the City of Kingston Official Plan, as amended, be further amended by the following changes:
  - (a) **Delete** Section 10E.1 'Princess Street Corridor Specific Policy Area, Williamsville Main Street' in its entirety and **replace** it with a new Section 10E.1 'Princess Street Corridor Specific Policy Area, Williamsville Main Street' as shown on Schedule 'H' to By-Law Number 2020-XX.
4. This by-law shall come into force and take effect on the day that is the day after the last day for filing an appeal pursuant to the *Planning Act*, provided that no Notice of Appeal is filed to this by-law in accordance with the provisions of Section 17, Subsection 24 of the *Planning Act*, as amended; and where one or more appeals have been filed within the time period specified, at the conclusion of which, the By-Law shall be deemed to have come into force and take effect on the day the appeals are withdrawn or dismissed, as the case may be.

Given all Three Readings and Passed: [Meeting date]

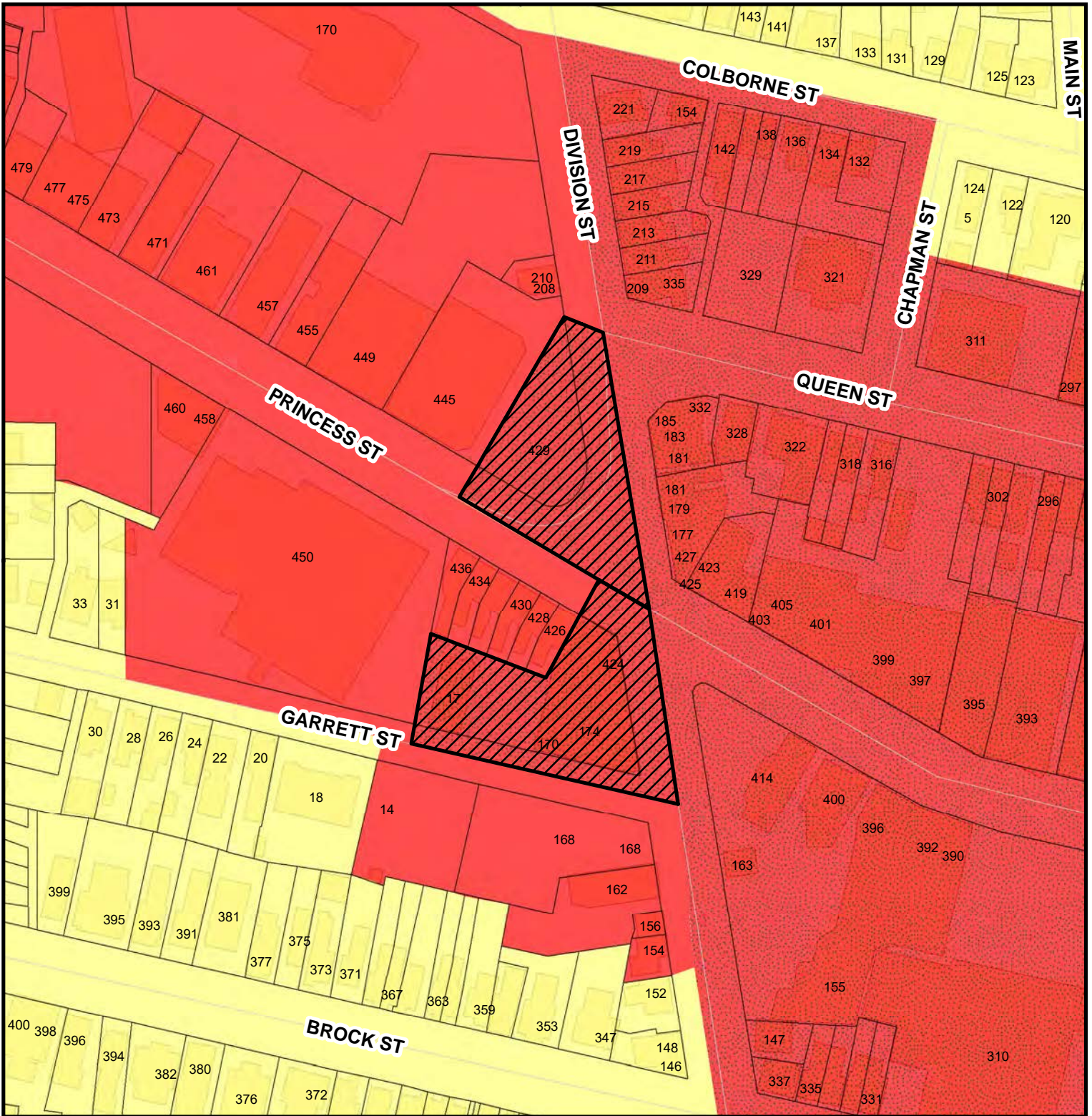
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**John Bolognone**  
City Clerk

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**Bryan Paterson**  
Mayor



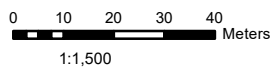


Planning Services

a department of  
Community  
Services

**SCHEDULE 'A'**  
**OFFICIAL PLAN AMENDMENT NUMBER 71**

File Number: D35-003-2020  
Addresses: 424, 429 Princess St;  
170, 174 Division St; 17 Garrett St



PREPARED BY: akeeping  
DATE: 2020-10-30

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**LEGEND**

**Official Plan Schedule 3-A, Land Use**

Lands Re-designated from Central Business District to Main Street Commercial

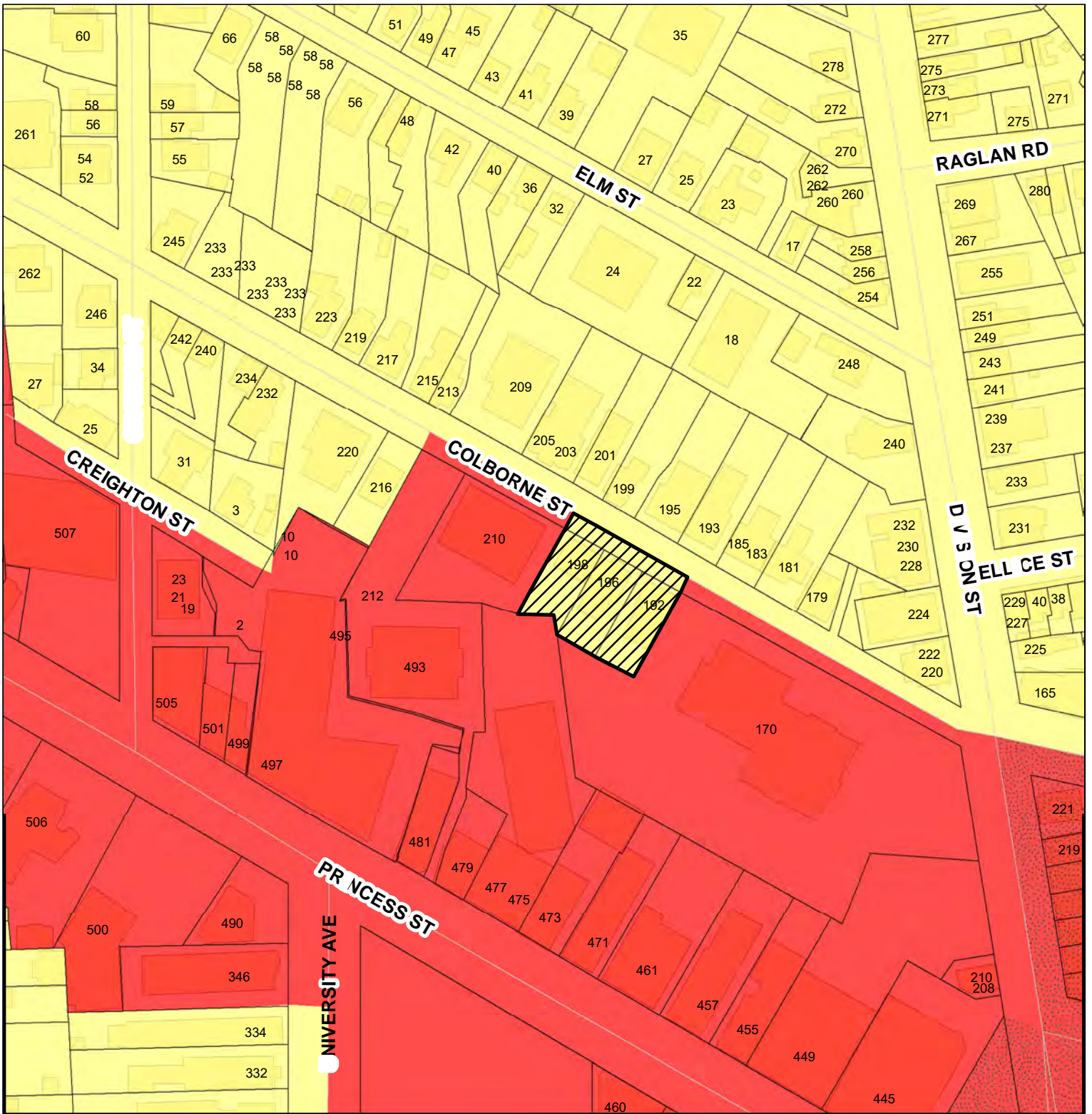
**Certificate of Authentication**

This is Schedule 'A' to By-Law Number \_\_\_\_\_,  
passed this \_\_\_\_\_ day of \_\_\_\_\_ 2020.

\_\_\_\_\_  
Mayor

\_\_\_\_\_  
Clerk



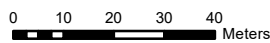


**SCHEDULE 'B'  
OFFICIAL PLAN AMENDMENT NUMBER 71**

File Number: D35-003-2020  
Addresses: 192, 196, 198 Colborne St

\_\_\_\_\_  
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Community  
Services



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PREPARED BY: akeeping  
DATE: 2020-10-30

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**LEGEND**

**Official Plan Schedule 3-A, Land Use**

 Lands Re-designated from Residential to Main Street Commercial

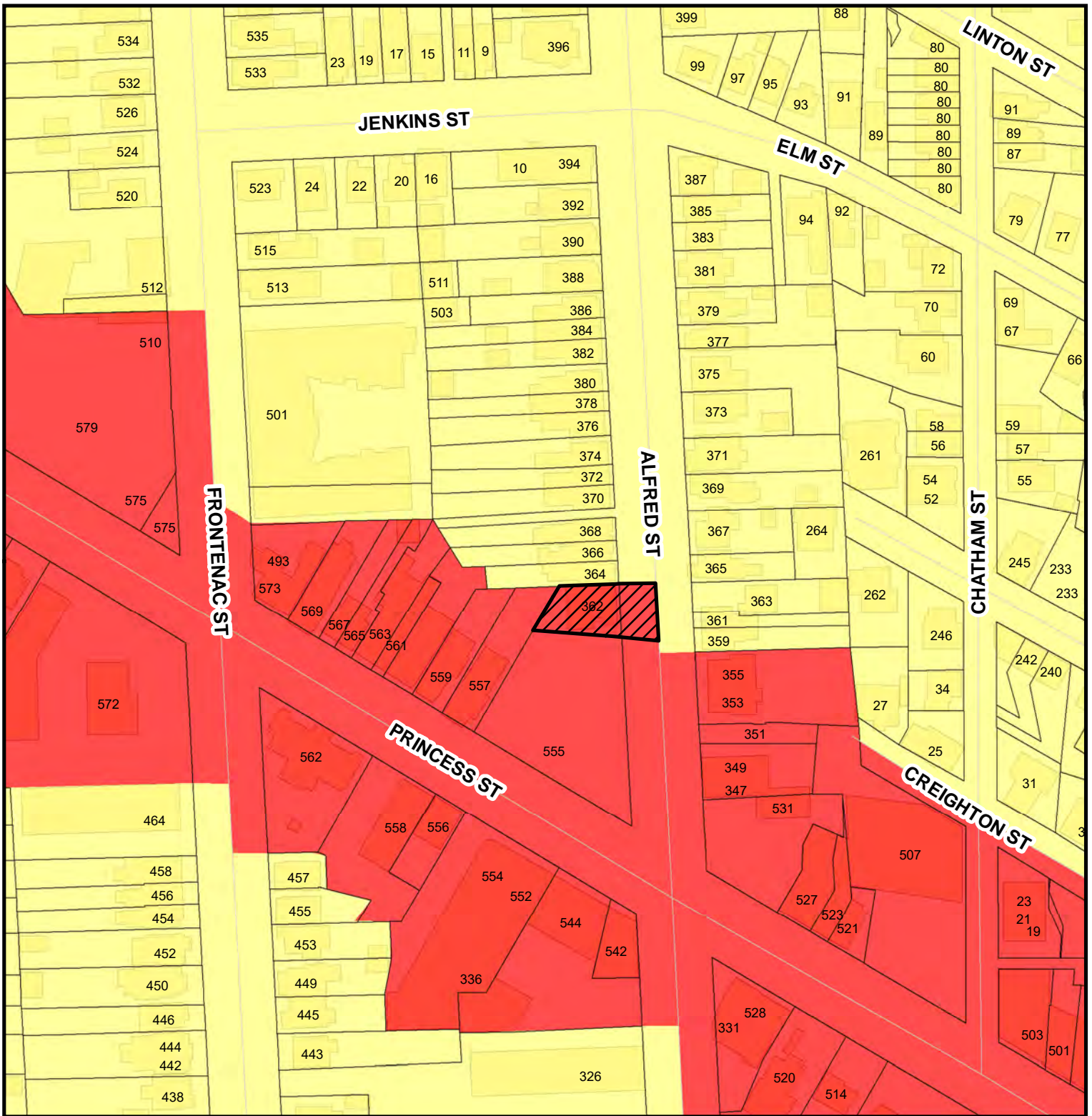
**Certificate of Authentication**

This is Schedule 'B' to By-Law Number \_\_\_\_\_,  
passed this \_\_\_\_\_ day of \_\_\_\_\_ 2020.

\_\_\_\_\_  
Mayor

\_\_\_\_\_  
Clerk



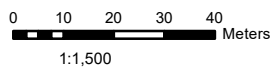


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**SCHEDULE 'C'  
OFFICIAL PLAN AMENDMENT NUMBER 71**

File Number: D35-003-2020  
Address: 362 Alfred St



PREPARED BY: akeeping  
DATE: 2020-10-30

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**LEGEND**

**Official Plan Schedule 3-A, Land Use**

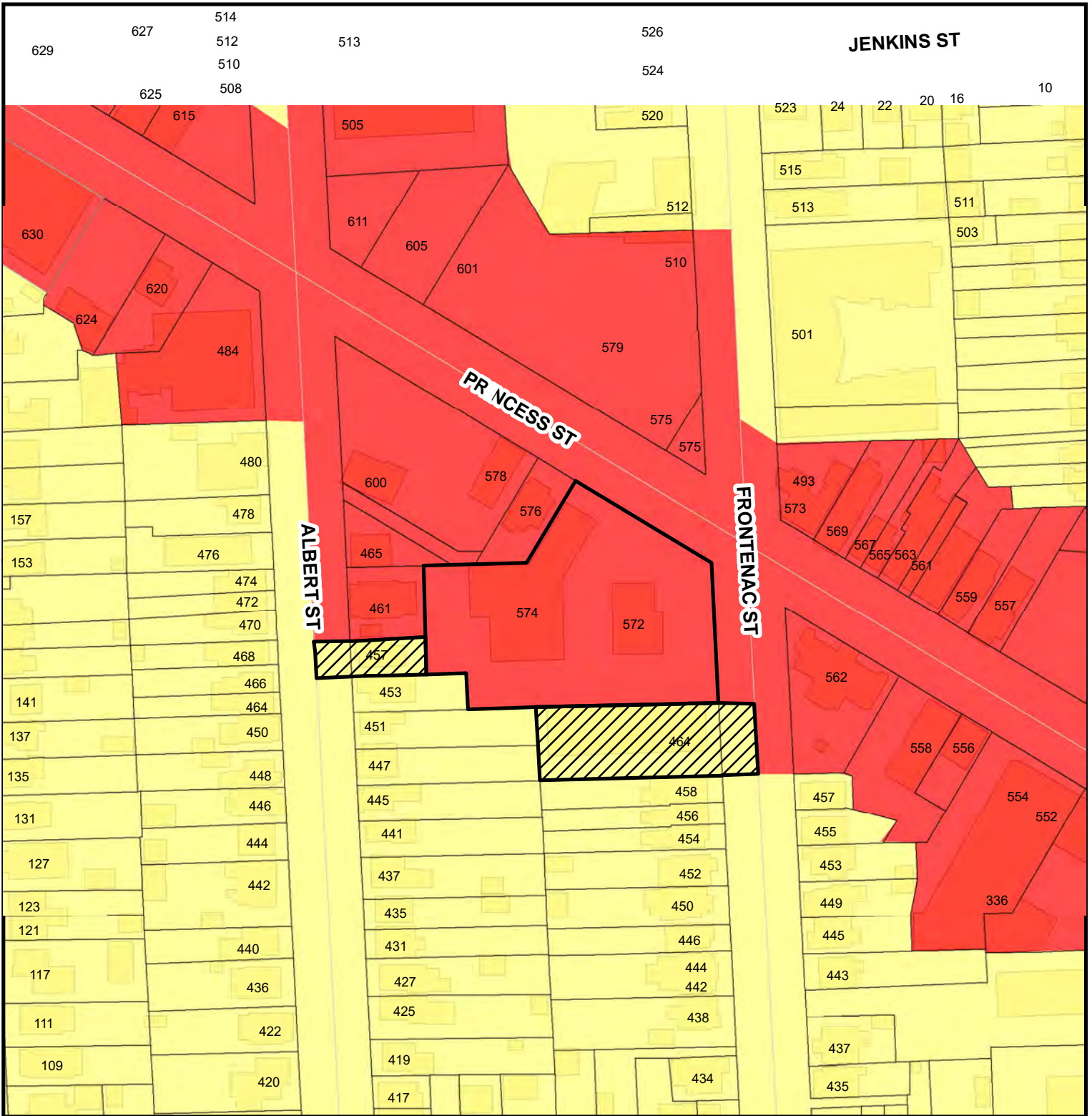
 Lands Re-designated from Main Street Commercial to Residential

**Certificate of Authentication**

This is Schedule 'C' to By-Law Number \_\_\_\_\_,  
passed this \_\_\_\_\_ day of \_\_\_\_\_ 2020.

\_\_\_\_\_  
Mayor

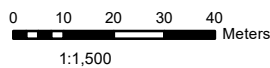
\_\_\_\_\_  
Clerk



**SCHEDULE 'D'**  
**OFFICIAL PLAN AMENDMENT NUMBER 71**

File Number: D35-003-2020  
 Addresses: 572, 574 Princess St;  
 465 Frontenac St; 457 Albert St

Planning Services  
 a department of  
 Community  
 Services





1:1,500

PREPARED BY: akeeping  
 DATE: 2020-10-30

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**LEGEND**

**Official Plan Schedule 3-A, Land Use**

-  Lands Re-designated from Residential to Main Street Commercial
-  Portion of Lands Already Designated Main Street Commercial

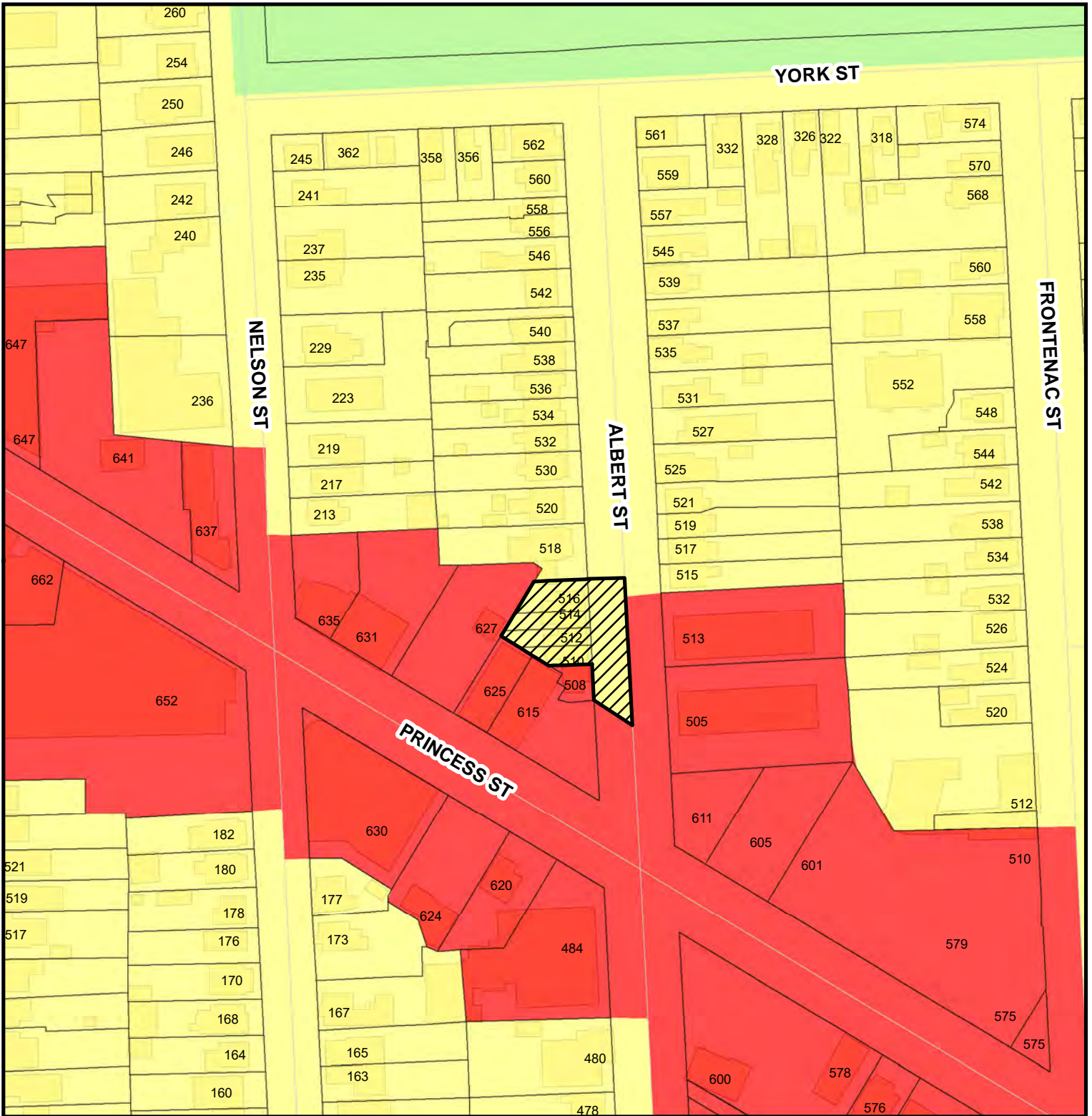
**Certificate of Authentication**

This is Schedule 'D' to By-Law Number \_\_\_\_\_,  
 passed this \_\_\_\_\_ day of \_\_\_\_\_ 2020.

\_\_\_\_\_  
 Mayor

\_\_\_\_\_  
 Clerk



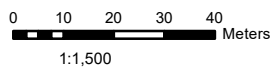


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**SCHEDULE 'E'  
OFFICIAL PLAN AMENDMENT NUMBER 71**

File Number: D35-003-2020  
Addresses: 510, 512, 514, 516 Albert St



1:1,500

PREPARED BY: akeeping  
DATE: 2020-10-30

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**LEGEND**

**Official Plan Schedule 3-A, Land Use**

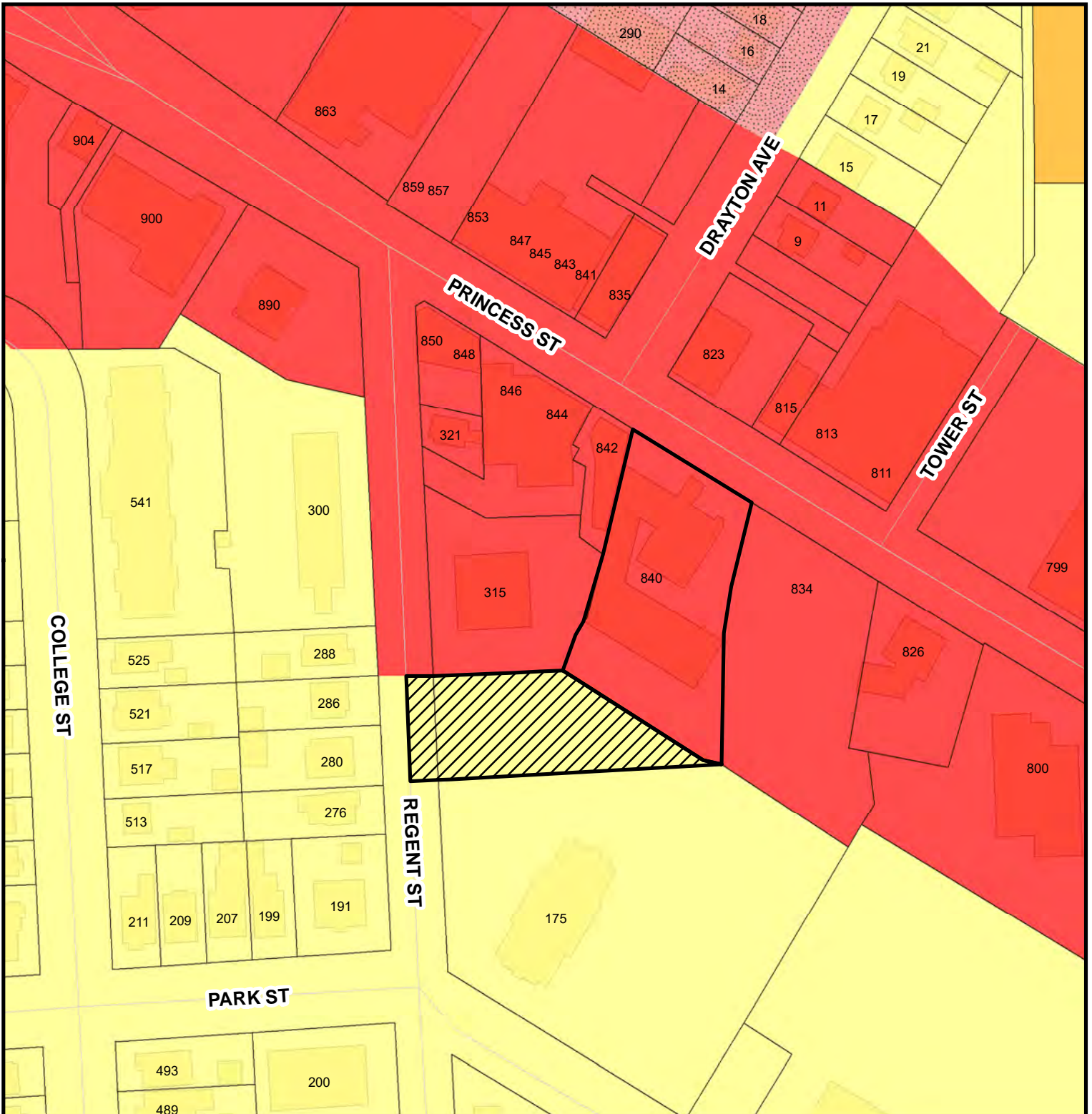
Lands Re-designated from Residential to Main Street Commercial

**Certificate of Authentication**

This is Schedule 'E' to By-Law Number \_\_\_\_\_,  
passed this \_\_\_\_\_ day of \_\_\_\_\_ 2020.

\_\_\_\_\_  
Mayor

\_\_\_\_\_  
Clerk

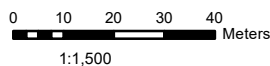


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**SCHEDULE 'F'**  
**OFFICIAL PLAN AMENDMENT NUMBER 71**

File Number: D35-003-2020  
Address: 840 Princess St





PREPARED BY: akeeping  
DATE: 2020-10-30

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**LEGEND**

**Official Plan Schedule 3-A, Land**

-  Lands Re-designated from Residential to Main Street Commercial
-  Portion of Lands Already Designated Main Street Commercial

**Certificate of Authentication**

This is Schedule 'F' to By-Law Number \_\_\_\_\_,  
passed this \_\_\_\_\_ day of \_\_\_\_\_ 2020.


\_\_\_\_\_  
Mayor

\_\_\_\_\_  
Clerk





**LEGEND**

 REQUIRED GROUND FLOOR COMMERCIAL ALONG PRINCESS STREET FRONTAGE

**BUILDING HEIGHTS**

 MAXIMUM HEIGHT THE LESSER OF 20 METRES OR 6 STOREYS

 TOWER PERMITTED - MAXIMUM HEIGHT THE LESSER OF 61.5 METRES OR 20 STOREYS



THE CORPORATION OF THE CITY OF KINGSTON

**SCHEDULE 'G' TO BY-LAW \_\_\_\_\_**  
**Official Plan Amendment No. 71**

File Number: D35-003-2020  
Location: Williamsville Main Street-  
Princess Street from Division Street  
to Bath Road

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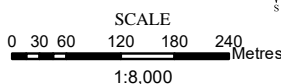
Prepared by: akeeping  
Date: 2020-11-06

**Legend:**

Official Plan Schedule PS-1,  
Princess Street Corridor Special Policy Area:  
Williamsville Main Street; City of Kingston

**Certificate of Authentication**

This is Schedule 'G' to By-Law No. \_\_\_\_\_  
passed this \_\_\_\_\_ day of \_\_\_\_\_ 2020



\_\_\_\_\_  
Mayor

\_\_\_\_\_  
Clerk

## Schedule H to By-Law Number 2020-XXX

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### 10E.1 Williamsville Main Street

The Williamsville Main Street, which extends between the westerly limit of the Central Business District at Division Street and the Bath Road/Concession Street intersection, is a major component of the Princess Street Corridor, as shown on Schedule 2. It is intended to be a focus of *development* in a pedestrian-oriented form that will provide support for the Princess Street transit corridor and more sustainable means of growth. The Williamsville Main Street is shown on Schedule PS-1 of this Plan.

#### Vision

- 10E.1.1. The vision for the Williamsville Main Street corridor is a vibrant and active intensification area with a mix of land uses framing an improved, pedestrian-oriented streetscape.

#### Guiding Principles

- 10E.1.2.
- a. Ensure community vitality through a mix of uses that includes retail/commercial at grade.
  - b. Improve the pedestrian and cyclist experience along Princess Street.
  - c. Identify opportunities to green the public and private realm.
  - d. Guide development at an appropriate scale and density that is compatible with the street width and neighbourhood context.
  - e. Encourage high quality architecture that is representative of the cultural heritage of Williamsville.
  - f. Protect existing residential areas from adverse effects.
  - g. Provide a sustainable framework for future development, including phasing-in of development so that it does not compromise the long-term servicing strategy for Williamsville.

#### Policies:

##### Permitted Uses

- 10E.1.4. Permitted uses are outlined in Section 3.4C, Main Street Commercial. Ground floor commercial uses are required for properties on Princess Street as shown on Schedule PS-1. Other properties in the area may be developed with a mix of commercial/office and residential at-grade.

## Other Official Plan Policies

- 10E.1.5.** In addition to these area-specific policies, there are other policies of the Official Plan that also apply to the Williamsville Main Street. Where there is a conflict between these area-specific policies and other policies of the Official Plan, these area-specific policies shall prevail.

## Cultural Heritage Resources and Character

- 10E.1.6.** The Williamsville Main Street has an evolving character that will continue to be defined by its role as a main transportation corridor and a priority transit route for the City. New *development* must protect, enhance, support or adaptively re-use cultural heritage resources. The heritage character statement for the Williamsville corridor is as follows: “The Williamsville study area is a linear mixed-use district with land uses and built form largely determined by the evolving nature of Princess Street.” The key heritage character defining element of the corridor is the pattern of streets and blocks determined by the juxtaposition of Princess Street and the existing street grid.

## Transit

- 10E.1.7.** Transit service is important to further growth and *development* within the Williamsville Main Street. The Williamsville Main Street is part of the Princess Street Corridor, which is identified in the Official Plan as a priority transit route and the focus of future *intensification*.

## Urban & Sustainable Design

- 10E.1.8.** New *development* within the Williamsville Main Street shall be designed in accordance with the urban design principles developed through the addendum to the Williamsville Main Street Study (2020). Any application for new *development* will be reviewed during the site plan control review process in terms of its compatibility with the architectural character of the area in which it is located and based on the addendum to the Williamsville Main Street Study (2020).
- 10E.1.9.** Storm water management is required. Buildings and site design shall control the rate of storm water run-off as per the City’s current design criteria.
- 10E.1.10** Green roofs are encouraged for all new *developments*. Where a green roof is also accessible to the building occupants as amenity area, it may be considered by the City as part of a *development’s* required amenity area calculation in the Zoning By-Law. Green roofs can be a combination of landscaped and hardscaped surfaces.

- 10.E.1.11.** Buildings and windows should be oriented and designed such that natural means of heating, cooling, ventilating, lighting interior spaces and avoiding intrusive overlook are maximized.
- 10E.1.12.** New development will be sited and designed to optimize pedestrian comfort related to weather, including, but not limited to, precipitation, heat, cold, shadowing, and wind.
- 10.E.1.13.** The use of high quality and appropriate exterior building materials at ground level, particularly at the streetwall and areas that are visible from Princess Street, is an important design consideration to help new *development* support the public realm and fit within the planned context for Williamsville. New *development* will utilize primary exterior materials selected for their permanence, durability and energy efficiency.

### **Public Realm Design**

- 10E.1.14.** Pedestrian movement and the function and aesthetic quality of the street are priorities for the public realm in the corridor, in order to transform the street into an attractive and vibrant destination.
- 10.E.1.15.** The setbacks along the street frontages are intended to provide a wider pedestrian realm. A widened pedestrian realm provides room for pedestrian movement, window shopping, chance meetings, retail overflow, small patios, and doorways and building entrances. This area may also include private street furniture, private signage, merchandise displays, and other similar elements.
- 10.E.1.17.** Planted and hardscaped areas with the potential for site furnishings, such as benches, secure bicycle parking, and transit shelters are strongly encouraged. Wherever possible, the boulevard should contain a linear planting of street trees in clustered tree trenches to encourage longevity and viability.
- 10.E.1.18.** The sidewalk and front façade of *developments* fronting onto Princess Street should generally be continuous, except where building forecourts, gardens, or other public access is required.

### **Ground Floor Conditions**

- 10E.1.19.** The floor-to-floor height of the ground level must be a minimum of 4.5 metres. This will facilitate commercial uses at grade and will ensure that the ground floor has a continuous character.
- 10E.1.20.** In the case of corner sites, the commercial uses should wrap the corner of the building, occupying a portion of the frontage on the secondary street.



- 10E.1.21.** Entrances for all land uses off of Princess Street, Division Street, Bath Road and Concession Street, as well as any commercial uses that wrap the corner of any side streets off of Princess Street, must be constructed at-grade to be accessible and to allow for viable commercial spaces.
- 10E.1.22.** Where ground floor residential uses are permitted along Princess Street, Division Street, Bath Road, and Concession Street, the building design must contribute to the pedestrian activity and amenity of the street and complement the commercial storefront design and character of the street. Residential uses will include an appropriate transition from the public to private realm. The height of the ground floor units must enable future conversions to commercial uses.
- 10E.1.23.** Where residential uses are proposed on side streets not listed in Section 10E.1.21, each unit shall have an independent pedestrian access. Some entrances may be raised above sidewalk level to provide transition from the public to private realm and/or to provide private amenity space or landscaping to buffer the residential unit from the public realm.
- 10E.1.24.** Canopies, cantilevers, awnings, recessed entrances, covered walkways and porticoes are recommended to provide weather protection to pedestrians and help articulate building elevations.
- 10E.1.25.** To encourage pedestrian interaction and enhance safety, facades facing Princess Street or adjacent to public open spaces shall be composed of large areas of glazing and should occupy a minimum of 60% of the ground floor frontage. The treatment of the ground floor shall be highly transparent with strong visual connections between the street and the ground floor interior spaces. Clear glass is preferable to promote the highest level of visibility. Lifestyle graphics and other forms of images that result in a solid panel behind glazing, or other permanent opaque coverings on windows and doors that prevent views into the ground floor of buildings are not considered glazing for the purpose of this policy. Where a single use retailer occupies the ground floor of a building, it is expected that the majority of the frontage will still be activated by other uses, such as with smaller shops or offices that have individual entrances and street presence.
- 10E.1.26.** Where residential or office uses are included above commercial uses, a separate exterior entrance must be provided at-grade. Long frontages without active entrances are discouraged.

### **Building Width and Articulation**

- 10E.1.27.** Building massing will be articulated or broken up through a continuous rhythm of building fronts achieved through a pattern of projections and recessions, entrances, display spaces, signage, and glazed areas to ensure that facades are not overly wide. The intent is to create the sense

of having multiple buildings along the width of the building. Vertical breaks and stepbacks will also be required.

### **Streetwall Heights**

- 10E.1.28.** New *development* shall support a vibrant pedestrian environment by establishing and maintaining a continuous streetwall that frames Princess Street. New *development* should provide a streetwall height of three to four storeys.
- 10E.1.29.** Where new development is adjacent to existing development on a side street, the new development will reflect the scale of that development in its design and provide for an appropriate built form transition.

### **Building Heights**

- 10E.1.30.** For the purposes of the Williamsville Main Street Corridor, any building up to 6 storeys in height is considered a mid-rise building, and a building greater than 6 storeys in height is considered to be a tall building.
- a.** Buildings shall be no taller than a 6 storey mid-rise building, unless specifically identified in the height map in Schedule PS-1 as being in an appropriate location for a tall building. Mechanical penthouses, other rooftop mechanical equipment, and architectural appurtenances to support green roofs, other rooftop sustainability elements, and rooftop amenity spaces are not considered to be a storey and may exceed the maximum allowable building height, provided they are appropriately screened and buffered from the street and adjacent residential areas.
  - b.** Where specifically permitted by Schedule PS-1, tall buildings shall have a podium no greater than 6 storeys in height in keeping with the intended form and function of the corridor. The tower portion of such tall building shall be designed in accordance with Section 10E.1.34.
  - c.** New developments must provide for appropriate transitions in height and massing between Princess Street and the adjacent residential areas.
  - d.** The minimum and maximum heights are regulated through the implementing zoning by-law and are intended to represent a firm cap on the height of new buildings.

### **Mid-Rise Building Setbacks and Stepbacks**

- 10E.1.31.** Mid-rise buildings shall be set back from lot lines shared with properties designated for residential use. The intent is to concentrate building

massing near Princess Street and provide physical separation between the new larger development and existing residential uses. This setback will be detailed in the implementing zoning by-law.

**10E.1.32.** The following policies apply to setbacks of mid-rise buildings:

- a. Buildings shall include setbacks above the 4<sup>th</sup> floor where a building faces a street.
- b. Buildings shall include setbacks above the 2<sup>nd</sup> floor where a building is adjacent to a low-rise residential building and no rear lane as per Section 10E.1.41 is proposed. Notwithstanding the required setbacks, where a building fronting onto Princess Street incorporates a low-rise built form intended to mimic grade related townhouse units, which are no greater than 2-storeys in height and at a maximum depth of 20 metres from the street face, the setbacks to the rear property line may be reduced for the low-rise built form component.
- c. Spaces created by building setbacks are encouraged to be used for amenity area and the inclusion of green space.
- d. Required setbacks will be detailed in the implementing zoning by-law.

**10E.1.33.** Along Princess Street, the portion of the building above the streetwall may step back from the side property line(s) adjacent to another building fronting Princess Street to provide space to incorporate window openings. Separation distance between new *development* and existing buildings must be in keeping with the requirements of the Ontario Building Code to allow for sufficient glazing and access to sunlight.

### **Tall Buildings**

**10E.1.34.** The following policies apply to tall buildings:

- a. Tall buildings will be designed with a mid-rise podium to reflect the intent and character of the addendum to the Williamsville Main Street Study (2020). These podiums will incorporate a mix of commercial and residential uses and shall meet all policies of Section 10E.1 that apply to the design of a mid-rise building.
- b. The tower component of tall buildings will have a maximum floorplate of 790 square metres.
- c. The tower component of tall buildings will be separated from each other by a minimum of 25 metres, measured from the two closest points between the towers. The tower component shall be setback a

minimum of 12.5 metres from the property line of an adjacent property, except where the adjacent property has already been developed with a tall building, such tower may be located closer than 12.5 metres to the property line so long as the 25 metre separation distance between towers is maintained.

- d. Consideration should be given to the location of a tower on a site. Towers will be located as far as possible from adjacent low-rise developments. Additional stepbacks from the top of the mid-rise podium will be required.

## Projections

- 10E.1.35. New *developments* shall not contain balconies that project beyond the face of the building for the first three storeys for all facades that face a street. For clarity, balconies can be inset to provide private amenity space for residents for the first three storeys. Balconies on the rear façade of *developments* may project from the building face above the second storey but should be set back from the rear property line. Balconies of new *developments* shall not encroach into the public road allowance.

## Blank Side Walls

- 10E.1.36. Blank side wall conditions may be acceptable up to a height of four (4) storeys if treated properly. To mitigate the impact of blank walls, they should be designed with a material finish that complements the architectural character of the main building façade. Blank walls are not permitted facing a street, and are only appropriate where they exist near to an existing building or where a future building can reasonably be expected.

## Required Parking

- 10E.1.37. The implementing zoning by-law requires residential parking spaces to be provided at a specific ratio based on the number of dwelling units. The City may support reductions in the required number of residential parking spaces through an application for a minor variance. Such application may seek to provide as few as zero parking spaces for residential units and shall be supported by a Parking Justification Report prepared by a qualified professional demonstrating that the proposed number of spaces is adequate to meet the future anticipated demand and does not impact or place demand on the public parking supply. Such proposals may also consider proposed additional methods to mitigate vehicle ownership and use through features in the building that support multi-modal living.

- 10E.1.38.** The City may support reductions in the required number of non-residential parking spaces through an application for a minor variance if it is supported by a Parking Justification Report prepared by a qualified professional demonstrating that the proposed number of spaces is adequate to meet the future anticipated demand.

### **Structured Parking**

- 10E.1.39.** Any new structured parking facilities will be developed according to the following policies:
- a. Structured parking that fronts onto Princess Street will be developed with active uses at ground level to provide attractive facades, animate the streetscape, and enhance pedestrian safety.
  - b. Vehicular access to the parking structure will be located at the rear and/or side of the building away from frontages along Princess Street, wherever possible.
  - c. Pedestrian entrances for the parking structure should be located adjacent to main building entrances, public streets, or other highly visible locations.
  - d. Parking structures that front onto secondary streets will be screened from view at sidewalk level and the ground floor level of the building should be enhanced through architectural detailing and landscaping.
  - e. Structured parking will be designed using the concepts and principles of Crime Prevention Through Environmental Design (CPTED).
  - f. Structured parking will be designed in such a way as to be able to be repurposed for other uses should the demand for parking decrease. Examples include, but are not limited to, conversions to accommodate more bicycle parking, communal amenity areas, or storage spaces.

### **Surface Parking**

- 10E.1.40.** Any new surface parking facilities will be developed according to the following policies:
- a. Where surface parking for new *development* is necessary, parking lots should be located at the rear of buildings. Surface parking lots shall not be permitted in front of buildings facing Princess Street or on lots directly abutting Princess Street.

- b. Private surface parking facilities will not be permitted as the primary long-term use of the property.
- c. Planting strips, landscaped traffic islands, and/or paving articulation should be used to define vehicle routes and smaller parking courts that provide pedestrian walkways, improve edge conditions, and minimize the negative visual impact of surface parking.
- d. Landscaping, or other parking area screening devices, should not obstruct the primary building façade or total visibility of the parking area.
- e. Preferential parking for bicycles, energy efficient vehicles, and car-share services are encouraged.
- f. Surface parking will be designed in such a way as to be able to be repurposed for other uses should the demand for parking decrease. Examples include, but are not limited to, space for additional structures, bicycle parking, or outdoor amenity areas.

## Rear Lanes

- 10E.1.41.** Rear lanes may be used to service commercial uses and provide access to structured and below grade parking, and shall be developed in accordance with the following policies:
- a. Rear lanes shall enter and exit onto adjacent side streets.
  - b. New *developments* along Princess Street should seek opportunities to provide continuity to existing adjacent rear lane systems where the lane condition terminates adjacent to the property.
  - c. Where new *developments* occur and lanes are required to provide access to rear lot parking facilities, the primary façade of the building should not face the lane, nor should the primary pedestrian ground level access be provided from a rear lane. This is necessary as it is important to maintain primary ground level access from the street in order to encourage street activity and to facilitate pedestrian movement.
  - d. Where new lanes are provided, a minimum width of 8.0 metres is required to accommodate appropriate vehicular and active transportation access.

## Vehicle Access, Loading and Servicing

- 10E.1.42.** Vehicle access points and loading and servicing areas shall be appropriately located and screened from public view, and shall be developed in accordance with the following policies:
- a. Wherever possible, vehicular access to on-site parking, loading, and servicing facilities shall be provided from side streets and rear lanes, and not from Princess Street.
  - b. Loading and service areas will be screened from prominent public areas and adjacent residential areas.
  - c. Service and drop-off area circulation shall not interfere with accessible pedestrian circulation.
  - d. Servicing and loading areas should be located in a coordinated manner within buildings rather than in adjacent structures or in outdoor areas. Garbage, loading, servicing, and utility functions should be integrated either adjacent to, or within the interior of a building at the rear whenever possible, with access from a rear lane or side street.
  - e. The number of curb cuts shall be reduced along Princess Street, wherever possible. This will increase opportunities for landscaping treatments and street furnishings, while creating continuity and providing safety to the pedestrian environment. New curb cuts are not recommended for *developments* fronting onto Princess Street. All such *developments* should be accessed by existing rear lanes, new rear lanes, side streets, or adjacent properties.

## Servicing Capacity

- 10E.1.43.** The review of a proposed *development* in Williamsville will ensure that the *development* does not compromise the servicing capacity of the area and/or hinder the development of other properties by limiting their access to servicing capacity. The Zoning By-Law may use a holding symbol to ensure the availability of servicing and may contain a maximum density provision to protect the full build out of this area.

The purpose of this density limit is to support the distribution of servicing capacity throughout the corridor, and to ensure that individual projects are not able to claim servicing capacity such that development of adjacent lands would be prohibited or unduly impacted. The limits are included in the zoning provisions to ensure that staff have the ability to recommend variances where appropriate. This is because residential densities measured in units per hectare are not an exact science, and the specific

configuration of a building can greatly impact the calculation. The intent is to ensure that density limits support the appropriate build-out of the corridor without an undue focus on the specific number.

## **Parkettes**

**10E.1.44.** In addition to parks within walking distance of the Williamsville Main Street, such as Victoria Park and the Memorial Centre, future development plans for the main street area are encouraged to include small urban parkettes. As *intensification* occurs, and more people live and work in the area, it is important that the main street be supported by new open spaces that allow residents access to outdoor space, that improve the pedestrian experience of the streetscape, that provide green landscaping where possible, and that bring people to the area.

- a. Parkettes are intended to be small in size, to accommodate intense and all-season uses, and to contain hardscape surfaces and elements, such as sitting areas and public art, and adequate soft landscape planting amenities.
- b. Where publicly accessible open space is required as part of the *development* of private property, this open space would need to be secured through parkland dedication, donation, acquisition, or a combination of these methods.
- c. Parkette features should reinforce the urban street edge and the parkette should be configured to allow for the functional design and placement of public amenities, such as street trees or benches.
- d. The final decision on the design of a parkette, and the facilities or amenities to be included in a parkette, shall be made by the City.

## **Green Streets**

**10E.1.45.** Green streets are defined as tree-lined corridors that create important visual links and enhance active transportation connections between areas within and surrounding the Williamsville Main Street. The City will continue to explore options for green streets treatments with consideration of the priorities for specific locations within the Williamsville Main Street Study.



**By-Law Number 2020-XX**

**A By-Law to Amend By-Law Number 8499, “Restricted Area (Zoning) By-Law of The Corporation of the City of Kingston” (Zone Changes to the Williamsville Main Street Commercial Zone “C4”)**

**Passed:** [Meeting Date]

**Whereas** by Order of the Minister of Municipal Affairs and Housing, The Corporation of the Township of Kingston, The Corporation of the Township of Pittsburgh and The Corporation of the City of Kingston were amalgamated on January 1, 1998 to form The Corporation of the City of Kingston as the successor municipal Corporation and pursuant to the Minister’s Order, any by-laws of the former municipality passed under the *Planning Act* continue as the by-laws covering the area of the former municipality now forming part of the new City; and

**Whereas** the Council of The Corporation of the City of Kingston deems it advisable to amend By-Law Number 8499, as amended, of the former City of Kingston.

**Therefore be it resolved that** the Council of The Corporation of the City of Kingston hereby enacts as follows:

1. By-Law Number 8499 of The Corporation of the City of Kingston, entitled “Restricted Area (Zoning) By-Law of The Corporation of the City of Kingston”, as amended, is hereby further amended as follows:
  - 1.1. Map 19 of Schedule “A”, as amended, is hereby further amended by changing the zone symbol of the subject sites from “C” to “C4-H (T1)”, as shown on Schedule “A” attached to and forming part of By-Law Number 2020-XX.
  - 1.2. Map 19 of Schedule “A”, as amended, is hereby further amended by changing the zone symbol of the subject sites from “B3” to “C4-H (T1)”, as shown on Schedule “B” attached to and forming part of By-Law Number 2020-XX.
  - 1.3. Map 30 of Schedule “A”, as amended, is hereby further amended by changing the zone symbol of the subject sites from “A” to “C4-H (T1)”, as shown on Schedule “C” attached to and forming part of By-Law Number 2020-XX.
  - 1.4. Map 30 of Schedule “A”, as amended, is hereby further amended by changing the zone symbol of the subject sites from “A” to “C4-H (T1)”, as

shown on Schedule “D” attached to and forming part of By-Law Number 2020-XX.

- 1.5. Map 19 of Schedule “A”, as amended, is hereby further amended by changing the zone symbol of the subject sites from “A” to “C4-H (T1)”, as shown on Schedule “E” attached to and forming part of By-Law Number 2020-XX.
  - 1.6. Map 20 of Schedule “A”, as amended, is hereby further amended by changing the zone symbol of the subject sites from “A” to “C4-H (T1)”, as shown on Schedule “F” attached to and forming part of By-Law Number 2020-XX.
  - 1.7. Map 20 of Schedule “A”, as amended, is hereby further amended by changing the zone symbol of the subject sites from “C1” to “C4-H (T1)”, as shown on Schedule “G” attached to and forming part of By-Law Number 2020-XX.
  - 1.8. Map 20 of Schedule “A”, as amended, is hereby further amended by changing the zone symbol of the subject sites from “B3” to “C4-H (T1)”, as shown on Schedule “H” attached to and forming part of By-Law Number 2020-XX.
  - 1.9. **Add** a new Schedule “O”, entitled “Williamsville Main Street”, as shown on Schedule ‘I’ to By-Law Number 2020-XX.
  - 1.10. **Delete** Section 23C, General Provisions for the Williamsville Main Street Commercial Zone “C4” in its entirety and **replace** it with a new Section 23C, General Provisions for the Williamsville Main Street Commercial Zone “C4” as shown on Schedule ‘J’ to By-Law Number 2020-XX.
2. That this by-law shall come into force in accordance with the provisions of the *Planning Act*.

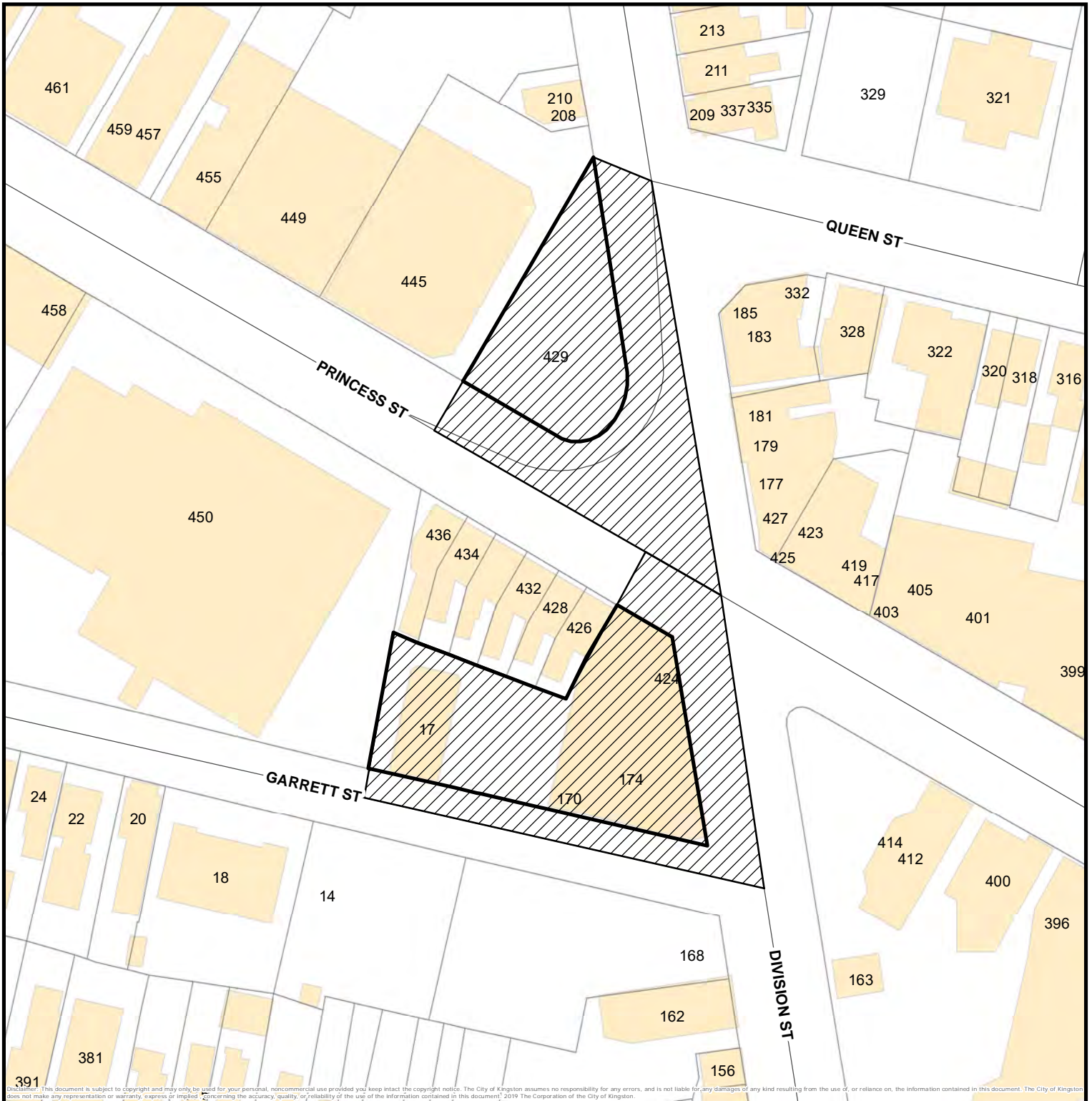
Given all Three Readings and Passed: [Meeting Date]

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**John Bolognone**  
City Clerk

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**Bryan Paterson**  
**Mayor**



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
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Community  
Services

## SCHEDULE 'A' TO BY-LAW NUMBER

File Number: D35-003-2020  
Addresses: 424, 429 Princess St;  
170, 174 Division St; 17 Garrett St

### Legend

#### Reference By-Law 8499, Map 19

 Rezoned from C to C4-H (T1)

#### Certificate of Authentication

This is Schedule 'A' to By-Law Number \_\_\_\_\_,  
passed this \_\_\_\_\_ day of \_\_\_\_\_ 2020.





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## SCHEDULE 'B' TO BY-LAW NUMBER

File Number: D35-003-2020  
Addresses: 192, 196, 198, 210 Colborne St

### Legend

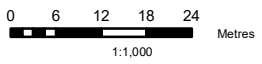
Reference By-Law 8499, Map 19

Rezoned from B3 to C4-H (T1)

### Certificate of Authentication

This is Schedule 'B' to By-Law Number \_\_\_\_\_,  
passed this \_\_\_\_\_ day of \_\_\_\_\_ 2020.

Prepared By: akeeping  
Date: 2020-11-05



95



\_\_\_\_\_  
Mayor

\_\_\_\_\_  
Clerk





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**SCHEDULE 'C'  
 TO BY-LAW NUMBER**

File Number: D35-003-2020  
 Address: 562 Princess St

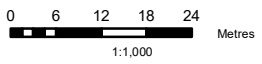
**Legend**

**Reference By-Law 8499, Map 30**

Rezoned from A to C4-H (T1)

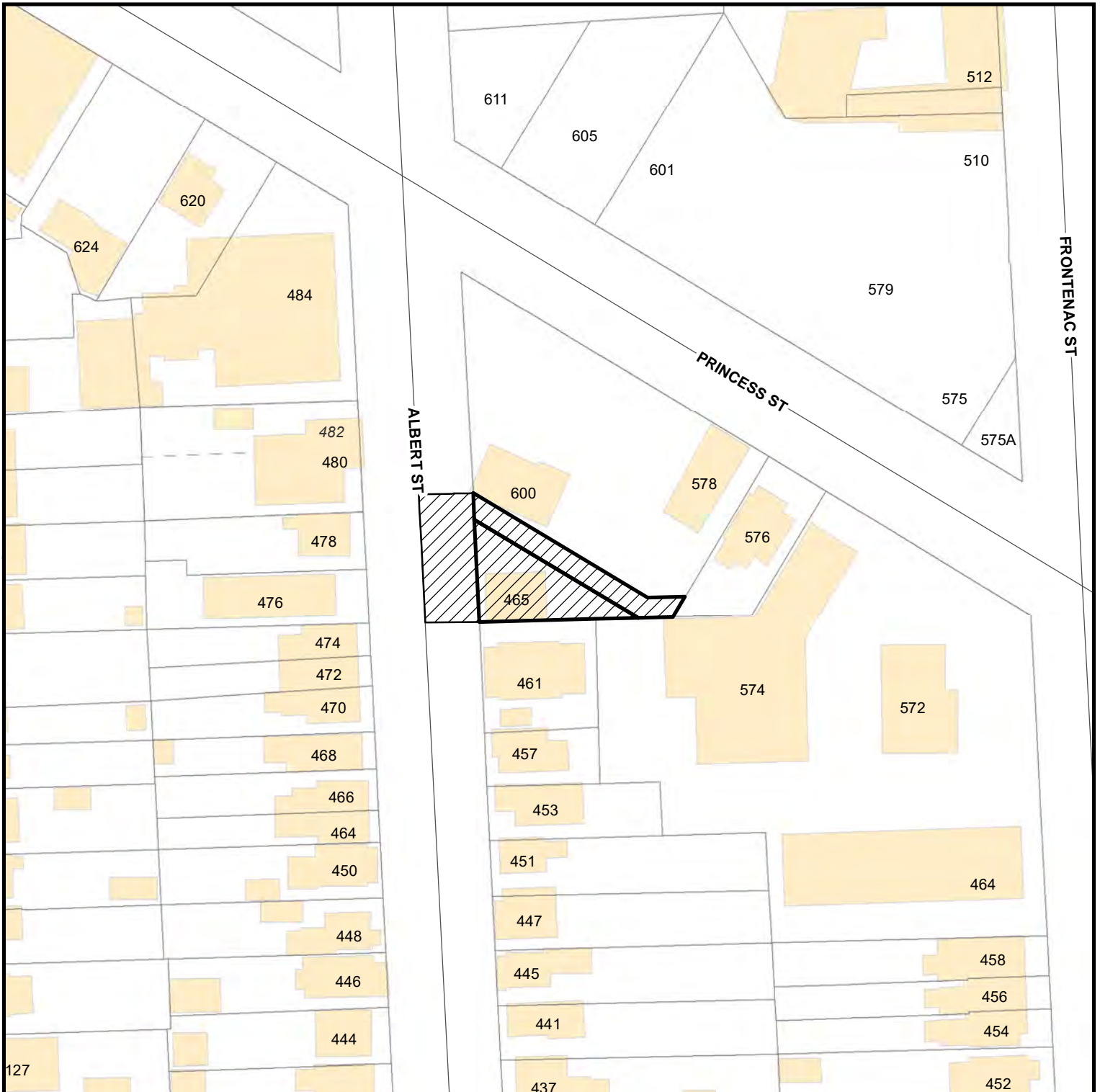
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Mayor

Clerk



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


## SCHEDULE 'D' TO BY-LAW NUMBER

File Number: D35-003-2020  
Address: 465 Princess St

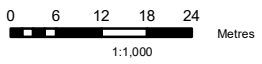
### Legend

Reference By-Law 8499, Map 30

 Rezoned from A to C4-H (T1)

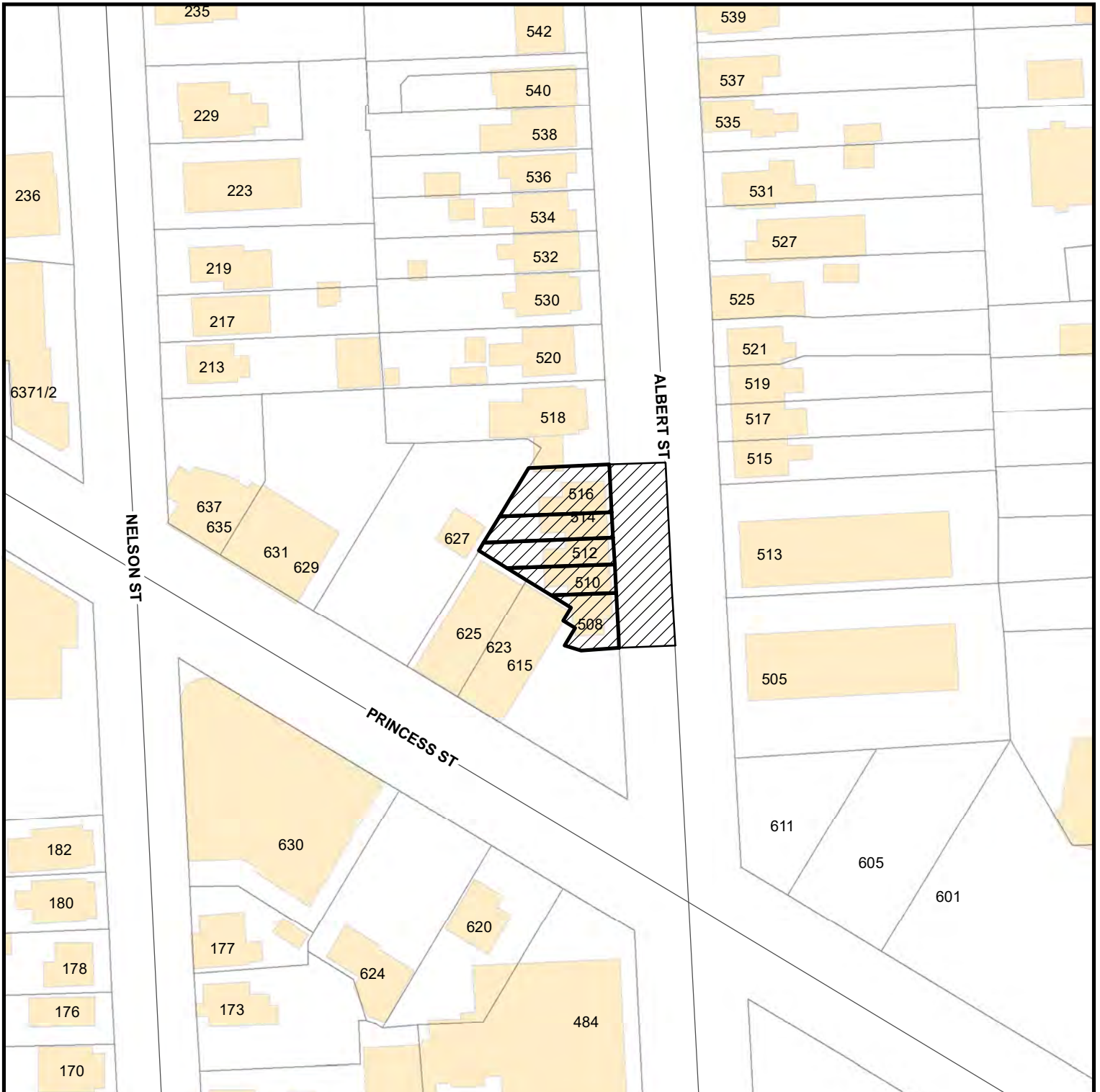
### Certificate of Authentication

This is Schedule 'D' to By-Law Number \_\_\_\_\_,  
passed this \_\_\_\_\_ day of \_\_\_\_\_ 2020.



\_\_\_\_\_  
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**SCHEDULE 'E'  
TO BY-LAW NUMBER**

File Number: D35-003-2020  
Addresses: 508, 510, 512, 514, 516 Albert St

**Legend**

**Reference By-Law 8499, Map 19**

Rezoned from A to C4-H (T1)

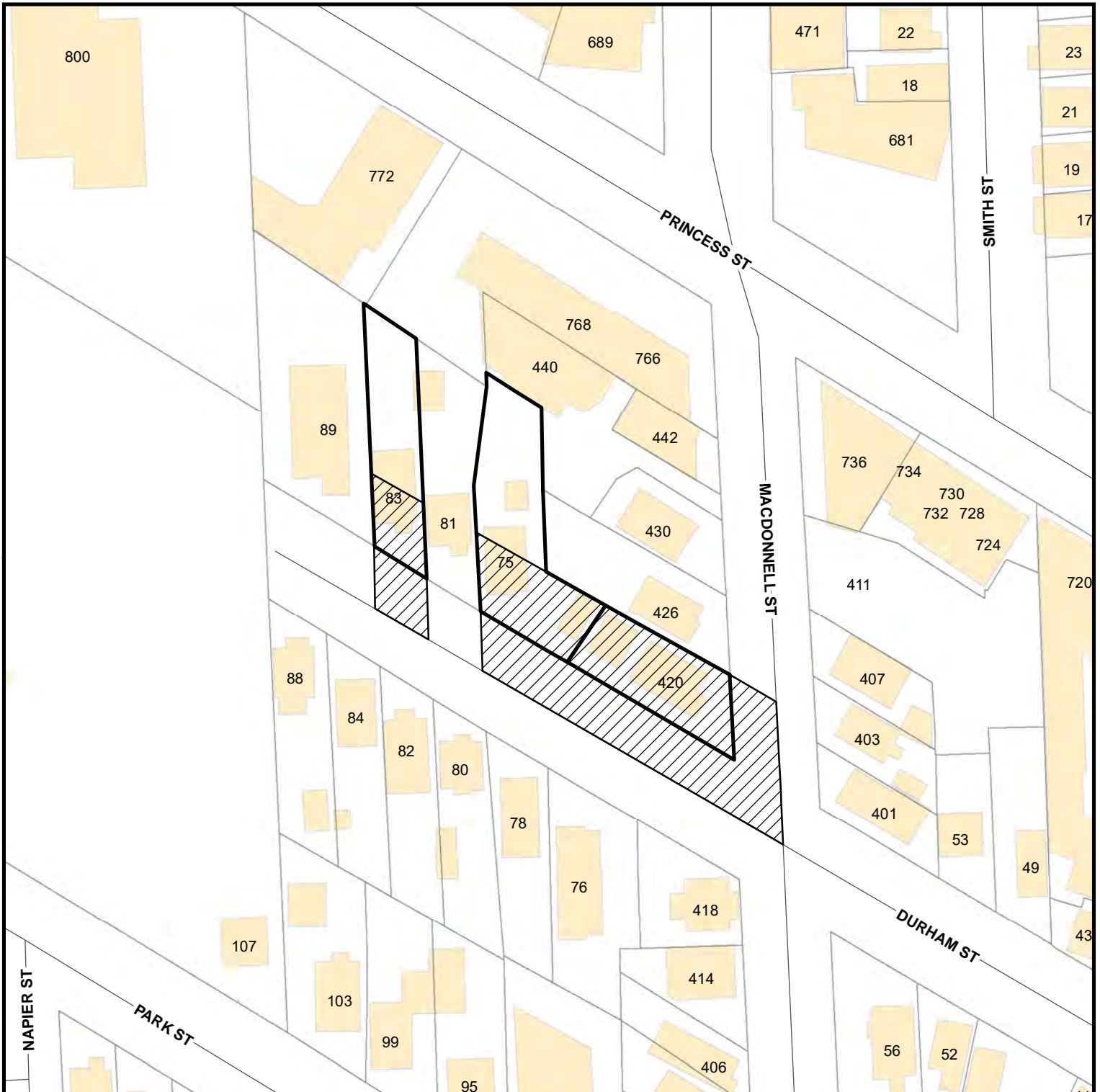
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## SCHEDULE 'F' TO BY-LAW NUMBER

File Number: D35-003-2020  
Addresses: 73, 83 Durham St;  
420 MacDonnell St

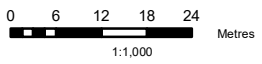
### Legend

Reference By-Law 8499, Map 20

 Rezoned from A to C4-H (T1)

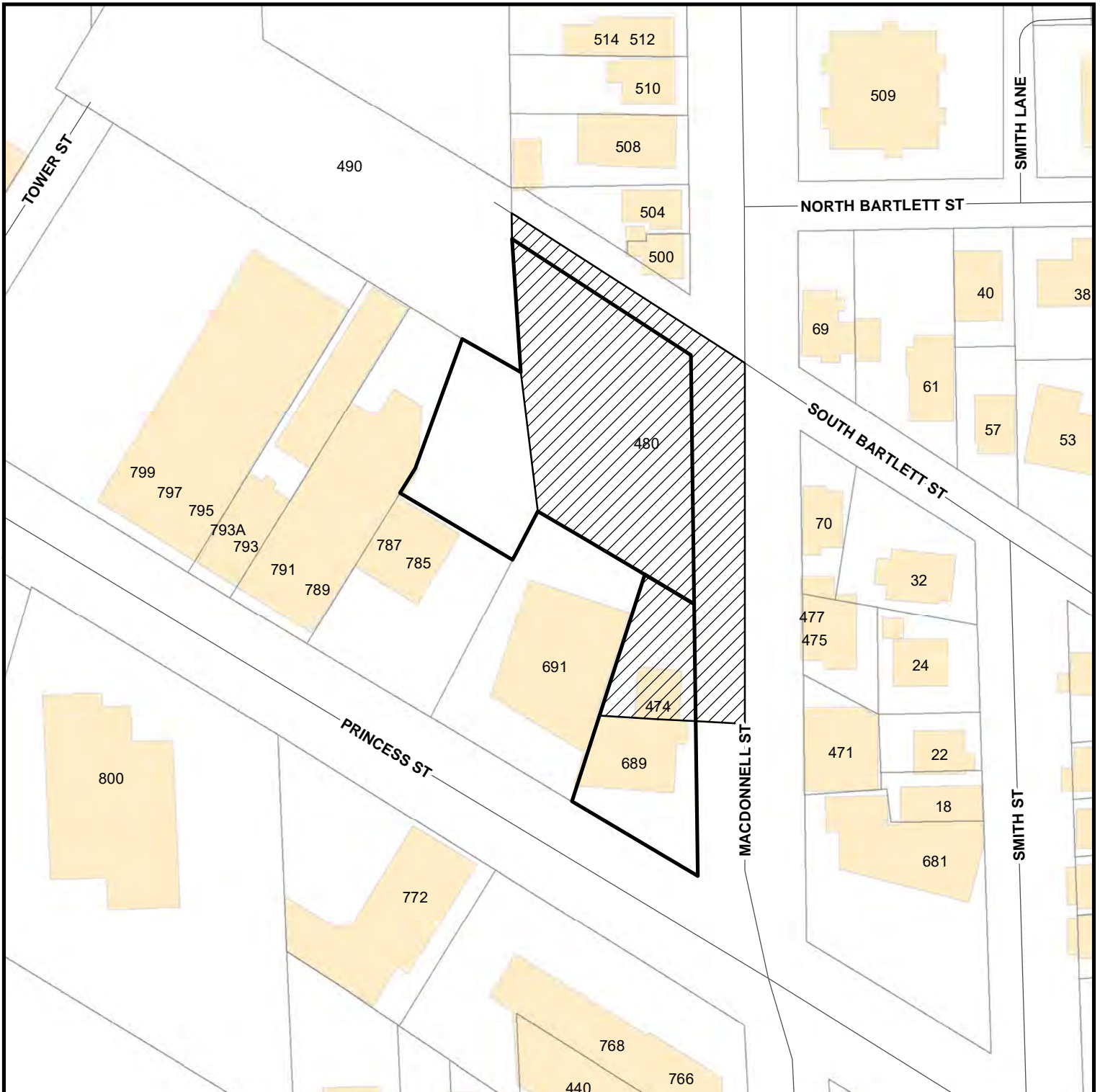
### Certificate of Authentication

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**SCHEDULE 'G'  
TO BY-LAW NUMBER**

File Number: D35-003-2020  
Addresses: 474, 480 MacDonnell St;  
689 Princess St

**Legend**

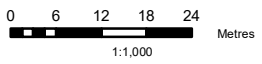
**Reference By-Law 8499, Map 20**

Rezoned from C1 to C4-H (T1)

**Certificate of Authentication**

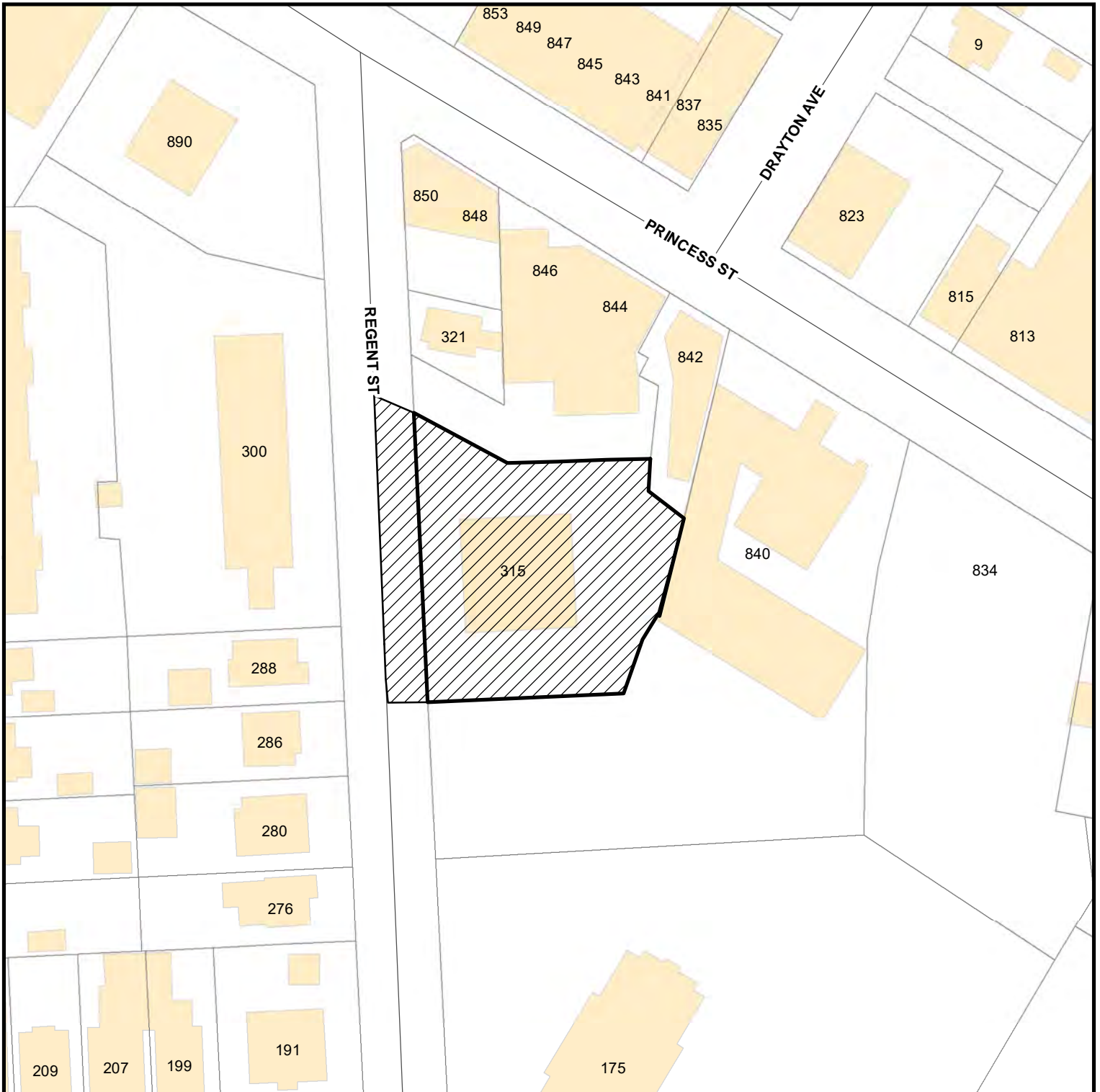
This is Schedule 'G' to By-Law Number \_\_\_\_\_,  
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Prepared By: akeeping  
Date: 2020-11-05



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## SCHEDULE 'H' TO BY-LAW NUMBER

File Number: D35-003-2020  
Address: 315 Regent St

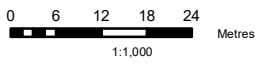
### Legend

Reference By-Law 8499, Map 20

Rezoned from B3 to C4-H (T1)

### Certificate of Authentication

This is Schedule 'H' to By-Law Number \_\_\_\_\_,  
passed this \_\_\_\_\_ day of \_\_\_\_\_ 2020.



\_\_\_\_\_  
Mayor

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Clerk





**LEGEND**

 REQUIRED GROUND FLOOR COMMERCIAL ALONG PRINCESS STREET FRONTAGE

**BUILDING HEIGHTS**

 MAXIMUM HEIGHT THE LESSER OF 20 METRES OR 6 STOREYS

 TOWER PERMITTED - MAXIMUM HEIGHT THE LESSER OF 61.5 METRES OR 20 STOREYS



THE CORPORATION OF THE CITY OF KINGSTON

**SCHEDULE 'I' TO BY-LAW \_\_\_\_\_**

File Number: D35-003-2020  
Location: Williamsville Main Street-  
Princess Street from Division Street  
to Bath Road

**Legend:**

SCHEDULE "O" TO ZONING BY-LAW  
NUMBER 8499 - WILLIAMSVILLE MAIN  
STREET

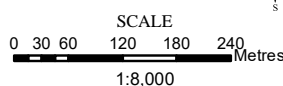
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passed this \_\_\_\_\_ day of \_\_\_\_\_ 2020

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Prepared by: akeeping  
Date: 2020-11-06



\_\_\_\_\_  
Mayor

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Clerk

## **Schedule J to By-Law Number 2020-XXX Amendment to Zoning By-Law Number 8499**

### **Section 23C General Provisions for the Williamsville Main Street Commercial Zone “C4”**

---

**23C.1** Subject to compliance with the provisions of Section 5, where applicable, the following provisions shall apply in the C4 Zone.

**23C.2 Permitted Uses** – The following uses only shall be permitted in the C4 Zone:

- (a) libraries, art galleries and museums;
- (b) churches, community halls, community centres and parish halls;
- (c) offices and ancillary uses associated with not-for-profit and social service agencies; offices for or in connection with businesses or professions; offices for printing and publishing; for clarity this includes co-working spaces;
- (d) artisans’ workshops and creativity centres;
- (e) hospitals, clinics, pharmacies, and medical laboratories;
- (f) retail stores or shops, markets, and bakeries;
- (g) undertakers' establishments;
- (h) banks and credit unions;
- (i) hotels, bars and restaurants, including take-out restaurants;
- (j) multiple family dwellings; row dwellings; supportive housing and special needs housing, including community homes, crisis care shelters, residential care facilities, recovery homes, group homes, and community support houses; co-operative living spaces;
- (k) laundromat and dry cleaners;
- (l) theatres, bowling alleys, pool and billiard halls, places of amusement, and private clubs;
- (m) recreational uses, including fitness centres/clubs;

- (n) commercial schools;
- (o) day care centres;
- (p) personal service shops;
- (q) accessory buildings, subject to the provisions of Section 23C.4(m).

**23C.3 Definitions** – The following definitions shall apply to lands, buildings or structures in the C4 Zone:

- (a) **Amenity Area** means the area situated within the boundaries of any residential development site intended for recreational purposes, and may include landscaped open space, patios, private amenity areas, balconies, communal lounges, swimming pools, children’s play areas, and similar uses, but does not include any area occupied at grade by a building’s service areas, parking areas, parking aisles, or driveways.
- (b) **Balcony** means an unenclosed or partially enclosed platform that is attached to and only directly accessible from within a building. A balcony includes associated guards, fencing, walls, screening and other associated features.
- (c) **Building Frontage** means the building façade that fronts on a street line where access to the building is available.
- (d) **First Storey** means the storey with its floor level closest to finished grade and shall exclude any floor of a building that has a floor level located below finished grade.
- (e) **Lot Line** means a line delineating any legal boundary of a lot.
  - i. **Exterior Lot Line** means the lot line of a corner lot which abuts the street, other than a front lot line.
  - ii. **Front Lot Line** means, in the case of an interior lot, the lot line dividing the lot from the street. In the case of a corner lot, the lot line abutting Princess Street shall be deemed the front lot line and the lot line abutting the other street shall be deemed an exterior lot line. In the case of a corner lot that does not abut Princess Street, the shorter lot line shall be deemed the front lot line. In the case of a corner lot which is also a through lot, the front lot line shall be the lot line abutting Princess Street.

- iii. **Interior Lot Line** means a lot line, other than a rear lot line that does not abut a street and is generally perpendicular to the front lot line.
  - iv. **Rear Lot Line** means the lot line(s) that is generally opposite to, and most distant from, the front lot line. In the case of a lot with frontage on Princess Street, all lot lines that separate the lot from a zone outside of the C4 zone or another commercial zone shall be considered a rear lot line.
- (f) **Podium** means the base component of any building that is greater than 20 metres in height (excluding mechanical penthouses) and shall only include the first through sixth storeys of such a building.
- (g) **Setback** means the horizontal distance from the lot line to the nearest part of any building or structure on a lot.
- i. **Exterior Setback** means the setback between the exterior lot line and the nearest part of any building or structure on the lot required by this By-Law.
  - ii. **Front Setback** means the setback between the front lot line and the nearest part of any building or structure on the lot required by this By-Law. Where a corner lot includes a front lot line and exterior lot line that do not intersect at one point, the front setback shall be determined by measuring the hypothetical point of intersection of the extension of the front lot line and the extension of the exterior lot line.
  - iii. **Interior Setback** means the setback between the interior lot line and the nearest part of any building or structure on the lot required by this By-Law.
  - iv. **Rear Setback** means the setback between the rear lot line and the nearest part of any building or structure on the lot required by this By-Law.
- (h) **Stepback** means the horizontal distance from the exterior wall of a specified storey to the exterior wall of the storey immediately below it. The horizontal distance shall be measured in the direction that is opposite to the lot line, ensuring that the stepback moves towards the centre of the lot.
- (i) **Storey** means that portion of a building between the top of any floor and the top of the floor next above it, or between the top of the floor and the ceiling above the floor, if there is no floor above it. Mechanical

penthouses, green roofs, rooftop amenity areas and other similar rooftop elements shall not be considered a storey.

- (j) **Streetwall** means the nearest wall or nearest portion of a wall of a building to a street line.
- (k) **Streetwall Height** means the vertical distance between the top of the streetwall and the finished grade immediately adjacent to the streetwall.
- (l) **Tower** means any portion of any building that is greater than 20 metres in height (excluding mechanical penthouses), excluding a podium, below grade parking structures and a mechanical penthouse.

**23C.4 Regulations** – The following regulations shall apply to lands, buildings, or structures in the C4 Zone:

- (a) Height:
  - i. All buildings / structures shall have a maximum height of the lesser of 20 metres or 6 storeys, except where shown on Schedule “O”, where the maximum height shall be the lesser of 61.5 metres or 20 storeys.
  - ii. The minimum streetwall height for all buildings / structures shall be 10.5 metres.
  - iii. A minimum of 75 percent of a wall of the building which faces a street line shall be built to the required front setback for the height of the streetwall.
  - iv. Notwithstanding Section 5.14, the height of mechanical penthouses and other rooftop equipment and elements shall be permitted in accordance with the provisions of Sections 23C.4(g) and 23C.4(h).
  - v. Where a lot or building is located within two different height areas shown on Schedule “O”, each portion of such lot or building shall comply with the height restrictions applicable to such portion of the lot or building.
- (b) Setbacks and Stepbacks:
  - i. Setbacks and stepbacks are required in accordance with the following table:

<b>Setbacks and Stepbacks</b>	<b>Minimum</b>	<b>Maximum</b>
Front setback and exterior setback	3.0 metres	5.0 metres



(along Princess Street, Division Street, Concession Street or Bath Road) – first storey		
Front setback and exterior setback (along Princess Street, Division Street, Concession Street or Bath Road) – second, third and fourth storeys	2.0 metres	5.0 metres
Stepbacks where the building faces Princess Street, Division Street, Concession Street or Bath Road – fifth and six storeys	2.0 metres from the exterior wall of the fourth storey	Not applicable
Front setback and exterior setback (along all other streets) – first through fourth storeys	2.0 metres	5.0 metres
Stepbacks where the building faces all other streets – fifth and sixth storeys	2.0 metres from the exterior wall of the fourth storey	Not applicable
Interior setback (for a property fronting on Princess Street)	0.0 metres	Not applicable
Interior setback (for a property not fronting on Princess Street)	1.2 metres	Not applicable
Rear setback	8.0 metres	Not applicable

- (d) Maximum Lot Coverage: 70%
- (e) Projections into Required Setbacks:
  - i. The following regulations apply to balconies that project out from the face of a building/structure:
    - 1. Balconies are permitted above the fourth storey of a building façade that is facing a street line, to a maximum depth of 1.5 metres.
    - 2. Balconies are permitted above the second storey of a building façade adjacent to a lot line that is not a street line, to a maximum depth of 2.0 metres.
- (f) Ground Floor Conditions:
  - i. Buildings fronting on Princess Street are required to have ground floor commercial uses on the first storey where any portion of the lot aligns with the area identified as “Required Ground Floor

Commercial Along Princess Street Frontage” on Schedule “O” to this By-Law.

- ii. Where ground floor commercial uses are required, the entire street frontage of the first storey, excluding areas devoted to a lobby or other shared entrances/exits for other permitted uses, shall be occupied by commercial uses. Portions of the floor area of the first storey that do not have frontage on a public street may be occupied by uses that service the building such as loading spaces, waste management facilities and rooms, mechanical rooms, bicycle parking facilities and other similar uses.
  - iii. The first storey of a building / structure shall have a minimum floor to floor height of 4.5 metres.
  - iv. The height of the first storey of a building / structure shall be measured from finished grade to the level of the floor immediately above it.
- (g) Mechanical Penthouses and Other Rooftop Mechanical Equipment:
- i. Notwithstanding Section 5.14, mechanical penthouses shall be permitted to exceed the maximum allowable building height by up to 3.5 metres.
  - ii. Mechanical penthouses shall not exceed 10 percent of the roof area on which they are located.
  - iii. Mechanical penthouses and other rooftop equipment shall be setback from the edge of the roof line a minimum distance equal to the height of the mechanical penthouse or other piece of rooftop mechanical equipment.
  - iv. Notwithstanding 23C.4(g)iii., enclosures dedicated only to stairs that are located at the end of a building shall be permitted within the required setback from the edge of a roof line.
- (h) Green Roofs and Other Rooftop Elements:
- i. Architectural appurtenances to support green roofs, other rooftop sustainability elements, or rooftop amenity spaces shall be permitted to exceed the maximum allowable building height by up to 3.5 metres.
- (i) Tower Conditions:

- i. Maximum Tower Floor Plate: Where a tower is permitted by Schedule “O” of this by-law, the maximum floor plate of the tower shall be 790 square metres. Tower floor plate shall include all areas enclosed within exterior walls, including hallways, elevators, stairs, mechanical shafts, etc.
  - ii. Tower separation: Where a tower is permitted by Schedule “O” of this by-law, it shall be separated from any other tower by a minimum distance of 25 metres and shall be located no closer than 12.5 metres from an adjacent property.
  - iii. Stepback: Where a tower is permitted by Schedule “O” of this by-law, it shall be setback from the podium by a minimum distance of 2.0 metres.
  - iv. Notwithstanding 23C.4(h)(ii), where an adjacent property has already been developed with a tower, the tower is permitted to be located closer than 12.5 metres to the lot line shared with that adjacent property so long as the 25 metre tower separation distance is maintained.
- (j) Parking Spaces
- i. Parking provisions shall be as set out in Section 5.3 of this Zoning By-Law, with the exception of the following provisions:
    - 1. Parking spaces shall not be permitted in a yard abutting a street line.
    - 2. Minimum number of residential parking spaces: 0.4 per dwelling unit.
    - 3. Maximum number of residential parking spaces: 1.0 per dwelling unit.
  - ii. Section 23C.4(j)(i)(1) shall not be construed to prohibit a reduction in the minimum number of parking spaces required if such reduction is authorized through a minor variance or rezoning in accordance with the Planning Act.
- (k) Maximum Residential Density

- i. The maximum residential density shall be 210 dwelling units per net hectare, except where a tower is permitted by 23C.4(2)(i), the maximum residential density of the tower and its podium shall be 480 dwelling units per net hectare.

(l) Loading Spaces

- i. Loading space provisions shall be as set out in Section 5.4 of this Zoning By-Law, with the exception of the following provisions:
  1. Loading spaces shall not be permitted in a yard abutting a street line.
  2. A minimum number of loading spaces shall be provided in accordance with the following table:

<b>Land Use</b>	<b>Commercial Gross Floor Area / Residential Dwelling Units</b>	<b>Number of Required Loading Spaces</b>
Commercial Uses	0-300 square metres	0
	Greater than 300 square metres to 2,500 square metres	1
	Greater than 2,500 square metres to 7,500 square metres	2
	Greater than 7,500 square metres	2 plus 1 for each additional 9,300 square metres beyond 7,500 square metres
Residential Uses	0-50 dwelling units	0
	51-399 dwelling units	1
	Greater than 400 dwelling units	2

(m) Amenity Area:

- i. The amenity area provisions of Section 5.27 of this by-law apply.
- ii. Notwithstanding Section 5.27(a), a minimum of 10 square metres of amenity area shall be provided for each dwelling unit on a lot.

(n) Accessory Buildings:

- i. Maximum Height: 4.6 metres

- ii. Maximum Lot Coverage: 10% of lot area
  - iii. Location: Detached accessory buildings shall be located:
    - 1. In an interior side yard or rear yard;
    - 2. A minimum of 1.2 metres from a lot line;
    - 3. Not closer to the street than the front of the main building;  
and,
    - 4. Not closer to the street than the side of the main building on a corner lot.
- (o) Transition Clause:
- i. Nothing in this By-Law shall prevent the development or use of a lot or one or more buildings or structures for which a complete application for a building permit was received by the City on or before (date of passing of this By-Law), if the development or use complies, or the building permit application is amended to comply, with the applicable former provisions of Zoning By-Law Number 8499 as it was read immediately prior to the passing of this By-Law.
  - ii. Where a complete application was received by the City on or before the date of passing of this By-Law for the development or use of a lot or one or more buildings or structures, approval may be granted, if deemed appropriate, in the context of the applicable former provisions of Zoning By-Law Number 8499 as it was read immediately prior to the passing of this By-Law, for one or more of the following applications:
    - 1. minor variances pursuant to Section 45 of the Planning Act;
    - 2. site plan control approval pursuant to Section 41 of the Planning Act;
    - 3. consent pursuant to Section 53 of the Planning Act;
    - 4. draft plan of subdivision approval or draft plan of condominium approval pursuant to Section 51 of the Planning Act;
    - 5. payment in lieu of parking agreement pursuant to Section 40 of the Planning Act; and

6. a part lot control exemption approval pursuant to Section 50 of the Planning Act.
- iii. Where the development or use of a lot or one or more buildings or structures qualifies under Section 23C.4(o)ii., a building permit may be issued after final approval is received for all required applications and if the development or use complies, or the building permit application for the development or use is amended to comply, with the provisions of the applicable former general zoning by-law as it was read immediately prior to the passing of this By-Law.
- iv. Nothing in this By-Law applies so as to continue the exemption provided by Section 23C.4(o) beyond the issuance of the final building permit upon which the exemptions are founded.
- v. Section 23C.4(o) shall be repealed in its entirety three years after the date of passing of this By-Law.

**23C.5 Holding Symbol:**

- (a) Purpose and Requirement for Removal of Holding Symbol:
  - i. The use and removal of the “-H” Holding Symbol shall be in accordance with the provisions of Section 5.39.
  - ii. Redevelopment of lands shall not proceed until the City is satisfied that there is adequate servicing capacity (i.e. water, wastewater, natural gas, and electrical) for the proposed development.
- (b) Permitted Interim Uses:
  - i. In accordance with Section 23C.2, provided the use occurs within the walls of a building / structure that existed on the date of the passage of this by-law.

**23C.6 Temporary Use:**

(T1) Williamsville Main Street

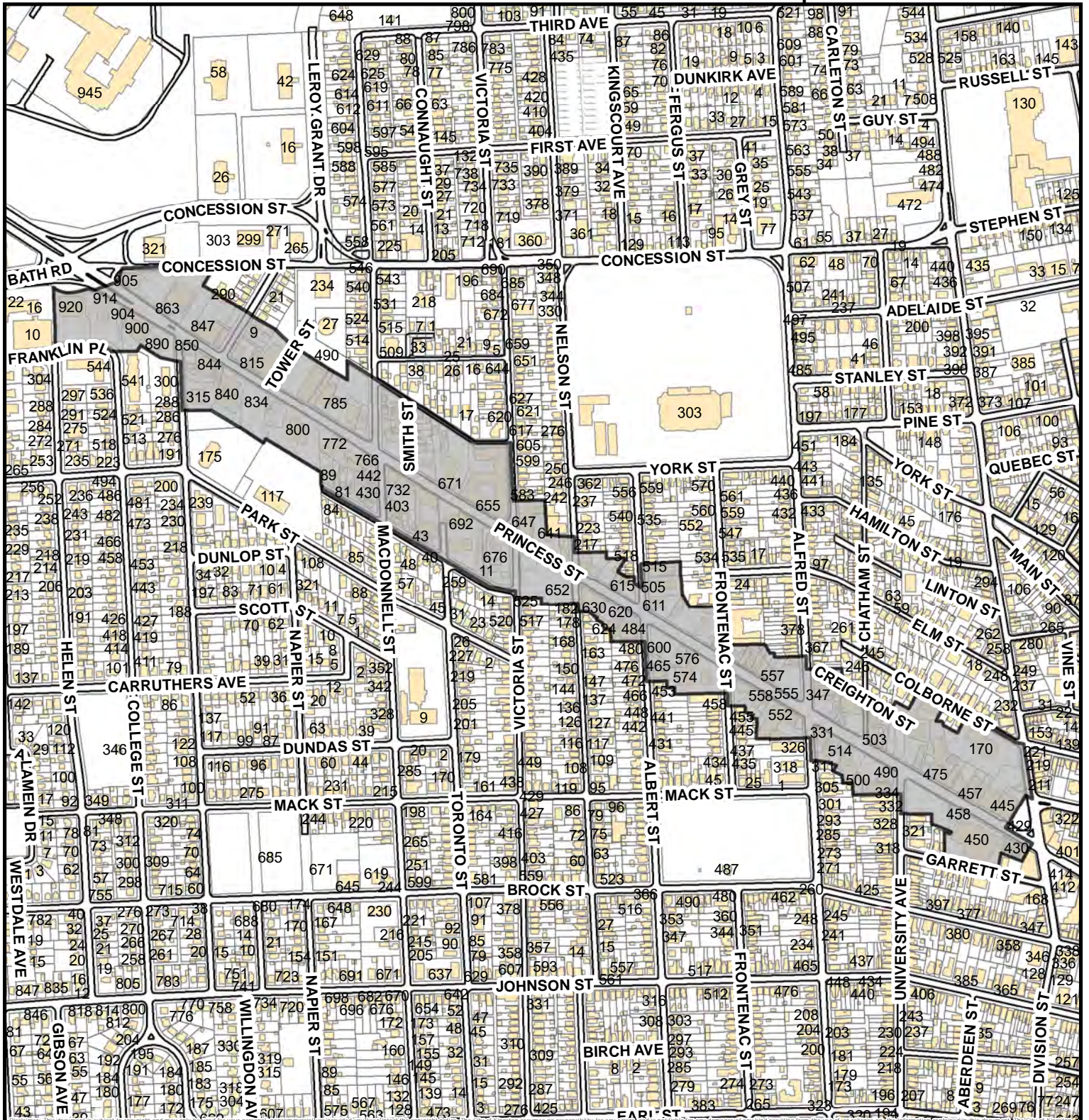
Expires: December 18, 2021 of By-Law Number 2019-6

The lands to which By-Law Number 2019-6 applies may be used for the following uses, in addition to those uses permitted in Section 23C.2:

- (a) Permitted Uses

- i. Surface parking lot





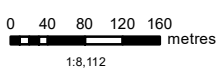
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PLANNING COMMITTEE  
**Key Map**

File Number: D35-003-2020  
Address: Williamsville Main Street Corridor

Planning Services  
a department of  
Community  
Services



DATE: 2020-02-26  
PREPARED BY: rrocheport



Subject Lands





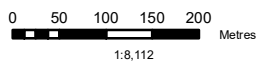
Corporation of the City of Kingston



Planning Services  
a department of  
Community  
Services

PLANNING COMMITTEE  
**Neighbourhood Context (2018)**

File Number: D35-003-2020  
Address: Williamsville Main Street Corridor



**Legend**

- Property Boundaries
- Proposed Parcels





**Demonstration of How the Proposal is Consistent with the Provincial Policy Statement**

Policy Number	Policy	Category	Consistency with the Policy
1.1.1	<p>Healthy, liveable and safe communities are sustained by:</p> <ul style="list-style-type: none"> <li>a. promoting efficient development and land use patterns which sustain the financial well-being of the Province and municipalities over the long term;</li> <li>b. accommodating an appropriate affordable and market-based range and mix of residential types (including single-detached, additional residential units, multi-unit housing, affordable housing and housing for older persons), employment (including industrial and commercial), institutional (including places of worship, cemeteries and longterm care homes), recreation, park and open space, and other uses to meet long- term needs;</li> <li>c. avoiding development and land use patterns which may cause environmental or public health and safety concerns;</li> <li>d. avoiding development and land use patterns that would prevent the efficient expansion of settlement areas in those areas</li> </ul>	<p>Managing and directing land use to achieve efficient and resilient development and land use patterns</p>	<p>The Williamsville Main Street study area is located within the urban boundary and is currently designated and zoned to accommodate mixed-use development. The proposed policies changes are intended to maintain the original intent of the Williamsville Main Street Study, while improving the economic viability of development within the this portion of the Princess Street Corridor. The proposed policy changes will contribute to the City's overall density, sustainability, and affordability goals.</p> <p>There are currently a variety of commercial and employment uses established for the main street. The proposed policies maintain the requirement for ground floor commercial use throughout most of the study area, as illustrated on Schedule PS-1 of the Official Plan, which will serve the long-term needs of residents.</p> <p>The Williamsville Main Street is currently serviced by express and</p>

Policy Number	Policy	Category	Consistency with the Policy
	<p>which are adjacent or close to settlement areas;</p> <p>e. promoting the integration of land use planning, growth management, transit-supportive development, intensification and infrastructure planning to achieve cost-effective development patterns, optimization of transit investments, and standards to minimize land consumption and servicing costs;</p> <p>f. improving accessibility for persons with disabilities and older persons by addressing land use barriers which restrict their full participation in society;</p> <p>g. ensuring that necessary infrastructure and public service facilities are or will be available to meet current and projected needs;</p> <p>h. promoting development and land use patterns that conserve biodiversity; and</p> <p>i. preparing for the regional and local impacts of a changing climate.</p>		<p>local transit routes and is in proximity to the Downtown. Existing and planned municipal servicing infrastructure will be available to meet current and projected needs within this portion of the Princess Street Corridor.</p> <p>The proposed policy changes support the City's goals relative to climate change, by reducing parking requirements, encouraging sustainable design elements, and permitting high-density residential uses along an existing express transit and active transportation routes adjacent to the Downtown.</p>
1.1.2	Sufficient land shall be made available to accommodate an appropriate range and mix of land uses to meet projected needs for a time horizon of up to 25 years, informed by	Managing and directing land use to achieve efficient and resilient development	The update to the Williamsville Main Street Study is intended to continue to spur intensification and infill development in an

Policy Number	Policy	Category	Consistency with the Policy
	<p>provincial guidelines. However, where an alternate time period has been established for specific areas of the Province as a result of a provincial planning exercise or a provincial plan, that time frame may be used for municipalities within the area.</p> <p>Within settlement areas, sufficient land shall be made available through intensification and redevelopment and, if necessary, designated growth areas.</p> <p>Nothing in policy 1.1.2 limits the planning for infrastructure, public service facilities and employment areas beyond a 25-year time horizon.</p>	and land use patterns	underutilized area of the City. The proposed policy changes support the findings of the City's recently updated Population, Housing, & Employment Projections (2019). Allowing for a limited number of strategically located taller buildings within the Williamsville Main Street will contribute to the City's overall density and take advantage of existing public infrastructure investments.
1.1.3.1	Settlement areas shall be the focus of growth and development.	Settlement Areas	The Williamsville Main Street Study Area is located within the City's Urban Boundary.
1.1.3.2	<p>Land use patterns within settlement areas shall be based on densities and a mix of land uses which:</p> <ul style="list-style-type: none"> <li>a. efficiently use land and resources;</li> <li>b. are appropriate for, and efficiently use, the infrastructure and public service facilities which are planned or available, and avoid the need for their unjustified and/or uneconomical expansion;</li> <li>c. minimize negative impacts to air quality and</li> </ul>	Settlement Areas	Allowing for a limited number of strategically located taller buildings within the Williamsville Main Street will contribute to the City's overall density, sustainability and affordability goals and take advantage of existing public infrastructure investments. Although infrastructure servicing capacity limitations prevent the immediate enactment of

Policy Number	Policy	Category	Consistency with the Policy
	<p>climate change, and promote energy efficiency;</p> <p>d. prepare for the impacts of a changing climate;</p> <p>e. support active transportation;</p> <p>f. are transit-supportive, where transit is planned, exists or may be developed; and</p> <p>g. are freight-supportive.</p> <p>Land use patterns within settlement areas shall also be based on a range of uses and opportunities for intensification and redevelopment in accordance with the criteria in policy 1.1.3.3, where this can be accommodated.</p>		<p>permissions for additional height in The Gateway Character Area, staff are recommending that once additional capacity becomes available, the area be up-zoned to allow greater height in support of efficient and economical infrastructure expansion.</p> <p>The proposed policy changes support the City's goals relative to climate change, by reducing parking requirements, encouraging sustainable design elements, and permitting high-density residential uses along an existing express transit and active transportation routes adjacent to the Downtown. Further, maintaining the requirement for ground floor commercial use throughout most of the main street ensures that opportunities for a range of uses will be maintained.</p>
1.1.3.3	<p>Planning authorities shall identify appropriate locations and promote opportunities for transit-supportive development, accommodating a significant supply and range of housing options through</p>	Settlement Areas	<p>The original goal of Williamsville Main Street Study was to spur development along a main street that is increasingly becoming pedestrian-oriented and transit-supportive with</p>

Policy Number	Policy	Category	Consistency with the Policy
	intensification and redevelopment where this can be accommodated taking into account existing building stock or areas, including brownfield sites, and the availability of suitable existing or planned infrastructure and public service facilities required to accommodate projected needs.		mixed use developments. The proposed policy changes identify key locations for increased height and density based on existing and planning infrastructure and the existing built form of surrounding neighborhoods.
1.1.3.4	Appropriate development standards should be promoted which facilitate <i>intensification</i> , <i>redevelopment</i> and compact form, while avoiding or mitigating risks to public health and safety.	Settlement Areas	The proposed policies include feasible development standards to facilitate intensification and promote a compact built form, while protecting the existing character of surrounding neighbourhoods.
1.1.3.6	New development taking place in designated growth areas should occur adjacent to the existing built-up area and should have a compact form, mix of uses and densities that allow for the efficient use of land, infrastructure and public service facilities.	Settlement Areas	The Williamsville Main Street Study Area is located adjacent to the City's Downtown. The proposed policies include feasible development standards to promote a compact built form. Key locations have been identified for increased height and density to allow for the efficient use of land, infrastructure and public service facilities.
1.3.1	Planning authorities shall promote economic development and competitiveness by: a. providing for an appropriate mix and range of employment, institutional, and broader	Employment	The proposed policies recommend continuing to require ground floor commercial uses in the areas illustrated on Schedule PS-1 in the Official Plan and including wording to



Policy Number	Policy	Category	Consistency with the Policy
	<p>mixed uses to meet long-term needs;</p> <p>b. providing opportunities for a diversified economic base, including maintaining a range and choice of suitable sites for employment uses which support a wide range of economic activities and ancillary uses, and take into account the needs of existing and future businesses;</p> <p>c. facilitating the conditions for economic investment by identifying strategic sites for investment, monitoring the availability and suitability of employment sites, including market-ready sites, and seeking to address potential barriers to investment;</p> <p>d. encouraging compact, mixed-use development that incorporates compatible employment uses to support liveable and resilient communities; with consideration of housing policy 1.4; and</p> <p>e. ensuring the necessary infrastructure is provided to support current and projected needs.</p>		<p>ensure that required at-grade commercial uses are extended to Division Street, Concession Street, and Bath Road. Further, to strengthen the viability of ground floor commercial uses, Staff recommend strengthening the wording in the Official Plan to ensure that all commercial entrances along Princess Street, Division Street, Concession Street, and Bath Road are developed at-grade, with a minimum ground floor height of 4.5 metres.</p> <p>The proposed policies include feasible development standards to encourage compact, mixed-use development that incorporates compatible retail and employment uses.</p> <p>The proposed policies will allow for the efficient use of existing and planned infrastructure investments.</p>
1.4.1	To provide for an appropriate range and mix of housing options and densities required to meet projected requirements of current and	Housing	The proposed policies will contribute to the City's ability to accommodate residential growth and

Policy Number	Policy	Category	Consistency with the Policy
	<p>future residents of the regional market area , planning authorities shall:</p> <ul style="list-style-type: none"> <li>a. maintain at all times the ability to accommodate residential growth for a minimum of 15 years through residential intensification and redevelopment and, if necessary, lands which are designated and available for residential development; and</li> <li>b. maintain at all times where new development is to occur, land with servicing capacity sufficient to provide at least a three-year supply of residential units available through lands suitably zoned to facilitate residential intensification and redevelopment, and land in draft approved and registered plans.</li> </ul> <p>Upper-tier and single-tier municipalities may choose to maintain land with servicing capacity sufficient to provide at least a five-year supply of residential units available through lands suitably zoned to facilitate residential intensification and redevelopment, and land in draft approved and registered plans.</p>		<p>improve the economic feasibility of residential development in the Williamsville Main Street Study Area at time of prolonged low vacancy rates. New residential development in the Williamsville Main Street Study Area will make efficient use of available and planned infrastructure servicing capacity.</p>
1.4.3	<p>Planning authorities shall provide for an appropriate range and mix of housing options and densities to meet projected market-based and</p>	Housing	<p>The Williamsville Main Street Study supports the development of a range and mix of housing options and</p>

Policy Number	Policy	Category	Consistency with the Policy
	<p>affordable housing needs of current and future residents of the regional market area by:</p> <ul style="list-style-type: none"> <li>a. establishing and implementing minimum targets for the provision of housing which is affordable to low and moderate income households and which aligns with applicable housing and homelessness plans. However, where planning is conducted by an upper-tier municipality, the upper-tier municipality in consultation with the lower-tier municipalities may identify a higher target(s) which shall represent the minimum target(s) for these lower-tier municipalities;</li> <li>b. permitting and facilitating: <ul style="list-style-type: none"> <li>1. all housing options required to meet the social, health, economic and well-being requirements of current and future residents, including special needs requirements and needs arising from demographic changes and employment opportunities; and</li> <li>2. all types of residential intensification, including additional residential units, and redevelopment in</li> </ul> </li> </ul>		<p>densities. The proposed policy changes will improve the economic feasibility of residential development in the Williamsville Main Street, thereby contributing to the City's affordability goals. The proposed development standards will contribute to minimizing the cost of housing and facilitate compact form, while maintaining appropriate levels of public health and safety.</p> <p>Planning Services continues to work with Housing and Social Services to support and encourage affordable housing options in the Williamsville Main Street and elsewhere in the City.</p> <p>The proposed height and density permissions will allow for the efficient use of land, infrastructure, public service facilities, and support the use of active transportation and transit where it already exists.</p>

Policy Number	Policy	Category	Consistency with the Policy
	<p>accordance with policy 1.1.3.3;</p> <p>c. directing the development of new housing towards locations where appropriate levels of infrastructure and public service facilities are or will be available to support current and projected needs;</p> <p>d. promoting densities for new housing which efficiently use land, resources, infrastructure and public service facilities, and support the use of active transportation and transit in areas where it exists or is to be developed;</p> <p>e. requiring transit-supportive development and prioritizing intensification, including potential air rights development, in proximity to transit, including corridors and stations; and</p> <p>f. establishing development standards for residential intensification, redevelopment and new residential development which minimize the cost of housing and facilitate compact form, while maintaining appropriate levels of public health and safety.</p>		
1.5.1.a	Healthy, active communities	Public Spaces,	The proposed policies

Policy Number	Policy	Category	Consistency with the Policy
	<p>should be promoted by:</p> <p>a. planning public streets, spaces and facilities to be safe, meet the needs of pedestrians, foster social interaction and facilitate active transportation and community connectivity</p>	<p>Recreation, Parks, Trails and Open Space</p>	<p>include an increase in the required setback from the street from 1.0 metre to 3.0 metres along Princess Street, Division Street, Concession Street, and Bath Road. This will allow for a wider land use transition zone which may accommodate active commercial frontages and opportunities for amenities and infrastructure such as street furniture, landscaping, bicycle parking, and patios.</p>
1.6.6.2	<p>Municipal sewage services and municipal water services are the preferred form of servicing for settlement areas to support protection of the environment and minimize potential risks to human health and safety. Within settlement areas with existing municipal sewage services and municipal water services, intensification and redevelopment shall be promoted wherever feasible to optimize the use of the services.</p>	<p>Sewage, Water and Stormwater</p>	<p>The proposed height and density permissions will allow for the efficient use of municipal sewage services and municipal water services where they currently exist or capacity upgrades are planned in the near future.</p>
1.6.6.7	<p>Planning for stormwater management shall:</p> <p>a. be integrated with planning for sewage and water services and ensure that systems are optimized, feasible and financially viable over the long term;</p> <p>b. minimize, or, where</p>	<p>Sewage, Water and Stormwater</p>	<p>The proposed Official Plan polices state that storm water management is required, and that buildings and site design shall control the rate of storm water run-off as per the City's</p>

Policy Number	Policy	Category	Consistency with the Policy
	<p>possible, prevent increases in contaminant loads;</p> <p>c. minimize erosion and changes in water balance, and prepare for the impacts of a changing climate through the effective management of stormwater, including the use of green infrastructure;</p> <p>d. mitigate risks to human health, safety, property and the environment;</p> <p>e. maximize the extent and function of vegetative and pervious surfaces; and</p> <p>f. promote stormwater management best practices, including stormwater attenuation and re-use, water conservation and efficiency, and low impact development.</p>		<p>current design criteria.</p> <p>The proposed Official Plan polices also continue to encourage green roofs for all new developments, which may contribute to improved stormwater management practices.</p> <p>Future development applications within the Williamsville Main Street Study Area will be subject to Site Plan Control approval, at which time the submission of a stormwater management report will be required and reviewed by Engineering Staff.</p>
1.6.7.4	A land use pattern, density and mix of uses should be promoted that minimize the length and number of vehicle trips and support current and future use of transit and active transportation.	Transportation Systems	The proposed policies will allow for the development of high-density residential and commercial uses in the Williamsville Main Street, where express transit, local transit, and active transportation routes already exist.
1.6.8.3	Planning authorities shall not permit development in planned corridors that could preclude or negatively affect the use of the corridor for the purpose(s) for which it was	Transportation and Infrastructure Corridors	An updated transportation operational assessment was completed for the Williamsville Main Street Study area. The



Policy Number	Policy	Category	Consistency with the Policy
	<p>identified.</p> <p>New development proposed on adjacent lands to existing or planned corridors and transportation facilities should be compatible with, and supportive of, the long-term purposes of the corridor and should be designed to avoid, mitigate or minimize negative impacts on and from the corridor and transportation facilities.</p>		<p>transportation analysis reviewed the transportation networks' existing performance and assessed how the network may perform under future land use/development scenarios. This analysis showed that the existing, approved, and development under review can be accommodated by the existing transportation network, but that the longer-term growth scenarios envisioned for the area do create issues with the transportation network during the weekday PM peak hour. The next phase of the transportation analysis will identify the specific operational improvements and infrastructure changes necessary for the transportation system to mitigate the impacts of the longer-term ultimate growth scenario. This work is slated to begin after the addendum is adopted.</p>
1.7.1	<p>Long-term economic prosperity should be supported by:</p> <p>a. promoting opportunities for economic development and community investment-</p>	Long-Term Economic Prosperity	<p>The proposed development standards will improve the economic feasibility of residential development on currently underutilized lots in the</p>

Policy Number	Policy	Category	Consistency with the Policy
	<p>readiness;</p> <p>b. encouraging residential uses to respond to dynamic market-based needs and provide necessary housing supply and range of <i>housing options</i> for a diverse workforce;</p> <p>c. optimizing the long-term availability and use of land, resources, infrastructure and public service facilities;</p> <p>d. maintaining and, where possible, enhancing the vitality and viability of downtowns and mainstreets;</p> <p>e. encouraging a sense of place, by promoting well-designed built form and cultural planning, and by conserving features that help define character, including built heritage resources and cultural heritage landscapes;</p> <p>f. promoting the redevelopment of brownfield sites;</p> <p>g. providing for an efficient, cost-effective, reliable multimodal transportation system that is integrated with adjacent systems and those of other jurisdictions, and is appropriate to address projected needs to support the movement of</p>		<p>Williamsville Main Street area, thereby contributing to economic development. The Williamsville Main Street currently contains many employment uses and is in proximity to many of the City's largest employers, such as those in the Downtown and University District. Further, the proposed policies recommend maintaining the requirement for ground floor commercial use throughout most of the main street, as illustrated on Schedule PS-1 in the Official Plan, to provide employment opportunities and daily needs in proximity to residential uses.</p> <p>The proposed policies will allow for the efficient use of existing and planned infrastructure investments. New development in the Williamsville Main Street will also benefit from the existing express and local transit routes that connect this part of the Princess Street Corridor to other parts of the City. The additional work proposed through the next phase of the transportation study for the Williamsville Main Street will also</p>

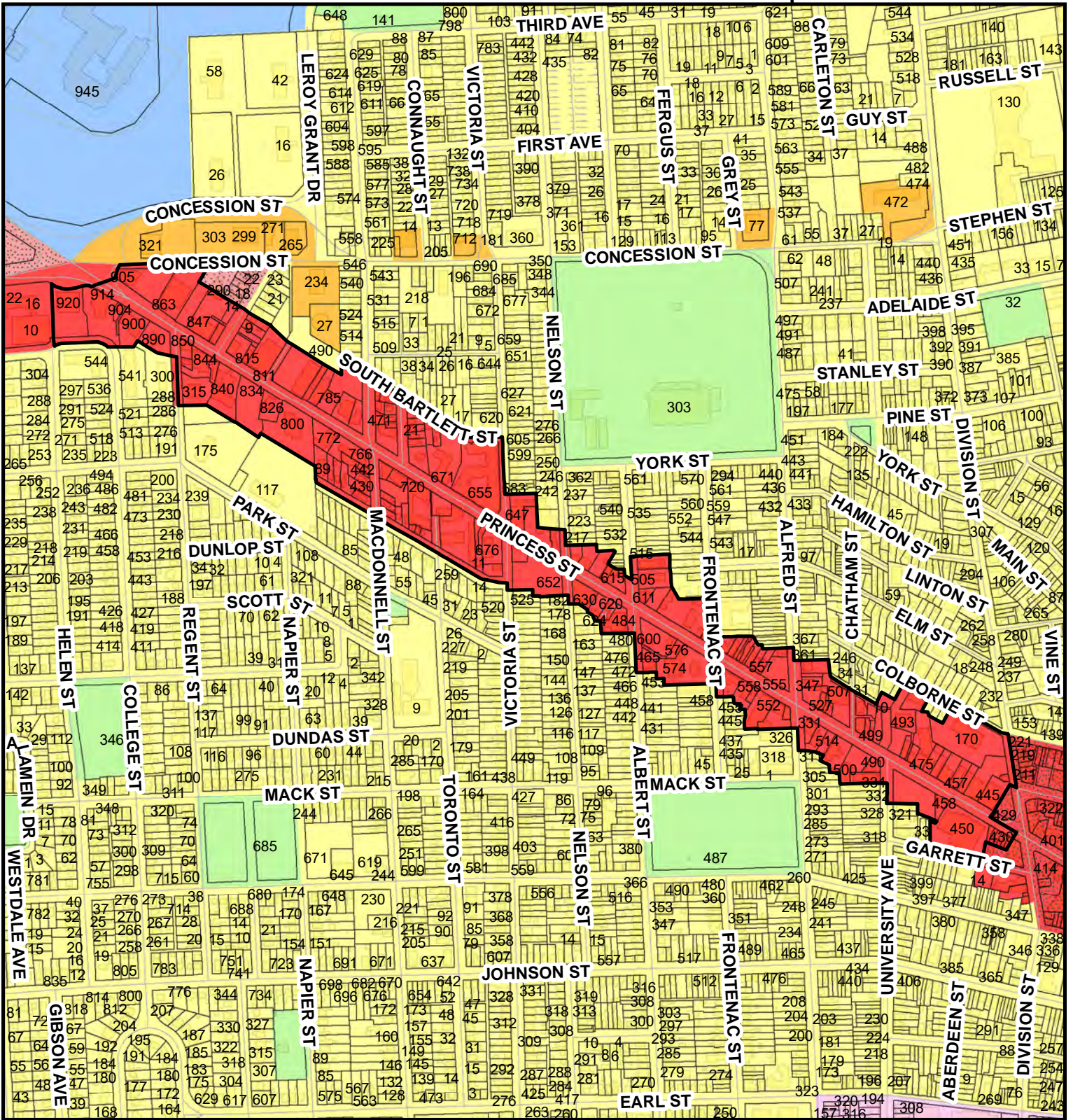
Policy Number	Policy	Category	Consistency with the Policy
	<p>goods and people;</p> <p>h. providing opportunities for sustainable tourism development;</p> <p>i. sustaining and enhancing the viability of the agricultural system through protecting agricultural resources, minimizing land use conflicts, providing opportunities to support local food, and maintaining and improving the agri-food network;</p> <p>j. promoting energy conservation and providing opportunities for increased energy supply;</p> <p>k. minimizing negative impacts from a changing climate and considering the ecological benefits provided by nature; and</p> <p>l. encouraging efficient and coordinated communications and telecommunications infrastructure.</p>		<p>incorporate changes to the public realm for pedestrians and cyclists.</p> <p>The proposed development standards, such as increased setbacks from the street and building stepback requirements, will promote well-designed built form and active streetscapes with space to accommodate amenities such as street furniture, landscaping, bicycle parking, and patios. The proposed polices recommend maintaining the protection of important cultural heritage resource in the main street and continuing to identify and protect heritage resources adjacent to the main street.</p> <p>The proposed policy changes support the City's goals relative to climate change, by reducing parking requirements, encouraging sustainable design elements, and permitting high-density residential uses along existing transit routes adjacent to the Downtown.</p>
1.8.1	Planning authorities shall support energy conservation	Energy Conservation,	The proposed development standards

Policy Number	Policy	Category	Consistency with the Policy
	<p>and efficiency, improved air quality, reduced greenhouse gas emissions, and preparing for the impacts of a changing climate through land use and development patterns which:</p> <ul style="list-style-type: none"> <li>a. promote compact form and a structure of nodes and corridors;</li> <li>b. promote the use of active transportation and transit in and between residential, employment (including commercial and industrial) and institutional uses and other areas;</li> <li>c. focus major employment, commercial and other travel-intensive land uses on sites which are well served by transit where this exists or is to be developed, or designing these to facilitate the establishment of transit in the future;</li> <li>d. focus freight-intensive land uses to areas well served by major highways, airports, rail facilities and marine facilities;</li> <li>e. encourage transit-supportive development and intensification to improve the mix of employment and housing uses to shorten commute journeys and decrease transportation congestion;</li> <li>f. promote design and orientation which</li> </ul>	Air Quality and Climate Change	<p>promote a compact built form along an existing transportation corridor. Further, the proposed policies promote the intensification of existing nodes at the Gateway (near Bath Road and Concession Street) and the Hub (Princess Street and Division Street) with greater height and density permissions. New residential and commercial development within the Williamsville Main Street will benefit from existing express transit, local transit, and active transportation routes along Princess Street to connect the main street to other areas of the City.</p> <p>The proposed Official Plan polices maintain that buildings and windows should be oriented such that natural means of heating, cooling, ventilating, and lighting interior spaces are maximized. Green roofs are also encouraged for all new developments.</p> <p>The proposed increase in minimum building setback to 3.0 metres along Princess Street and other arterial roads</p>

Policy Number	Policy	Category	Consistency with the Policy
	<p>maximizes energy efficiency and conservation, and considers the mitigating effects of vegetation and green infrastructure and;</p> <p>g. maximize vegetation within settlement areas, where feasible.</p>		<p>will provide more space for vegetation such as street trees.</p>
2.6.1	<p>Significant built heritage resources and significant cultural heritage landscapes shall be conserved.</p>	<p>Cultural Heritage and Archaeology</p>	<p>The proposed polices recommend maintaining the protection of important cultural heritage resources in the Williamsville Main Street and identifies work underway to protect heritage resources adjacent to the main street, focusing on side streets.</p> <p>For development proposals on a protected heritage property, the submission of a Heritage Impact Assessment will be required and reviewed by Heritage Planning Staff in advance of issuing Site Plan Control approval.</p>
2.6.2	<p>Development and site alteration shall not be permitted on lands containing archaeological resources or areas of archaeological potential unless significant archaeological resources have been conserved.</p>	<p>Cultural Heritage and Archaeology</p>	<p>On any property identified in the City's Archaeological Master Plan as having archaeological potential, the completion of an archaeological assessment will be required and reviewed by Heritage Planning</p>

Policy Number	Policy	Category	Consistency with the Policy
			Staff in advance of issuing Site Plan Control approval.
2.6.3	Planning authorities shall not permit development and site alteration on adjacent lands to protected heritage property except where the proposed development and site alteration has been evaluated and it has been demonstrated that the heritage attributes of the protected heritage property will be conserved.	Cultural Heritage and Archaeology	For development proposals on adjacent lands to a protected heritage property, the submission of a Heritage Impact Assessment will be required and reviewed by Heritage Planning Staff in advance of issuing Site Plan Control approval to demonstrate that the heritage attributes of the protected heritage property will be conserved.

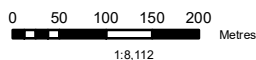




Planning Services  
a department of  
Community  
Services

PLANNING COMMITTEE  
**Official Plan, Existing Land Use**

File Number: D35-003-2020  
Address: Williamsville Main Street Corridor



**Legend**

- Subject Lands
- ARTERIAL COMMERCIAL
- BUSINESS PARK INDUSTRIAL
- CENTRAL BUSINESS DISTRICT
- DISTRICT COMMERCIAL
- INSTITUTIONAL
- MAIN STREET COMMERCIAL
- OPEN SPACE
- RESIDENTIAL





## Demonstration of How the Proposal Conforms to the Official Plan

Policy	Category	Conformity with the Policy
<p>2.2.7 The City's existing Centres and Corridors, as shown on Schedule 2, are areas of mixed use and mixed buildings, including employment, residential, commercial and supporting uses and facilities. These will be the areas where intensification will be focused, and where greater densities of residential and nonresidential development will be permitted. Corridors are identified as those areas that provide linkages between Centres and are accordingly well-suited to accommodate priority transit and a mix of uses that promote active transportation. Intensification in the form of high-density residential development proposed in a Centre or Corridor that is not subject to area specific planning policies, included in Section 10, will be considered subject to the policies of Section 3.3.C of this Plan. The technical policy framework established in Section 9.12 will be used to ensure that the proposal demonstrates: the need for the proposed supply of residential units taking into account population and housing forecasts; the appropriateness of the use, density, scale and massing of built form; how the proposal makes a positive impact to the neighbourhood character;</p>	<p>City Structure – Centres &amp; Corridors</p>	<p>The Williamsville Main Street Study Area is in a Corridor, as shown on Schedule 2 – City Structure of the Official Plan. The proposed policy changes are consistent with Section 2.2.7 in that it allows for the mixed-use intensification of the Princess Street Corridor, where greater densities of residential and non-residential development are to be permitted.</p> <p>The Williamsville Main Street Area currently acts as a transit and active transportation corridor, provided connectivity to Downtown and other areas of the City. Local and express transit routes, as well as buffered bike lanes, are currently in place within the Williamsville Main Street. Additional work through the second phase of a transportation study for the Williamsville Main Street will be conducted in the near future, which will look at further improvements to the public realm for all modes of transportation.</p> <p>The Williamsville Main Street Study Area is subject to area specific planning policies included in Section 10E.1, which are proposed to be amended through this application.</p>

Policy	Category	Conformity with the Policy
<p>how adverse effects have been mitigated; and, how the roads and infrastructure can accommodate the proposal. Technical analyses may be required to demonstrate conformity with the policy objectives of the Plan.</p>		
<p>2.3.2 In 2013, residential density within the City’s Urban Boundary was 25.7 units per net hectare. The City intends to increase the overall net residential and nonresidential density within the Urban Boundary through compatible and complementary intensification, the development of under-utilized properties and brownfield sites, and through the implementation of area specific policy directives tied to Secondary Planning Areas and Specific Policy Areas, as illustrated in Schedule 13.</p>	<p>Principles of Growth – Intensification</p>	<p>The Williamsville Main Street Study Area is a Specific Policy Area within the City’s Urban Boundary, as identified on Schedule 13. The proposed policy changes will allow for additional height and density at strategic locations within the Corridor to provide for compatible and complementary intensification and the development of under-utilized properties.</p>
<p>2.4.4 New residential development and new secondary plans are subject to the following policies and minimum densities:</p> <ul style="list-style-type: none"> <li>a. for the existing built-up residential areas, a net urban residential density of 22 dwelling units per net hectare is established as the overall minimum density, except where specifically increased in subsections (b), (c), and (d) below;</li> <li>b. for large-scale developments and greenfield areas, a</li> </ul>	<p>Phasing of Growth – Minimum Residential Density</p>	<p>As the Williamsville Main Street is identified as a Corridor in Schedule 2 of the Official Plan, it is an area intended for intensification of a minimum of 75 units per net hectare. The proposed zoning by-law amendment includes a maximum density provision. The policies of the Official Plan, specifically in Section 10E.1, are being amendment through this application to ensure appropriate built form of future developments and appropriate transitions to neighbouring residential areas.</p>

Policy	Category	Conformity with the Policy
<p>minimum of 37.5 residential units per net hectare is established for new residential development in order to be transit supportive;</p> <p>c. for mixed use building developments in existing and proposed Centres and Corridors, a minimum density of 75 residential units per net hectare is established as the target for new residential development in order to support active transportation and transit; and,</p> <p>d. a moderate increase in density will be permitted adjacent to Centres and Corridors so as to accommodate a transition in density from areas intended to support high density residential to those supporting low and medium densities, provided the proposal demonstrates conformity to the policies of Section 2.6 and 2.7 of this Plan.</p>		
<p>2.4.5 The City has established the following minimum targets for intensification to occur within the Urban Boundary.</p> <p>a. It is the intent of the City that 40 percent of new residential development occur through intensification.</p> <p>b. It is the intent of the City that ten percent of new non-residential</p>	<p>Phasing of Growth – Intensification Targets</p>	<p>As the Williamsville Main Street is identified as a Corridor in Schedule 2 of the Official Plan, it is an area intended for intensification of a minimum of 75 units per net hectare.</p>

Policy	Category	Conformity with the Policy
development occur through intensification.		
<p>2.5.1 Development within the City will be coordinated with land use planning and phased according to the City's ability to provide adequate transportation access and municipal infrastructure, including full water, sewer and stormwater management services within the urban area. The lands within the Urban Boundary, except for the Special Planning Areas, are the priority development areas. Special Planning Areas shown on Schedule 2 anticipate long-term infrastructure planning.</p>	<p>Phasing Municipal Infrastructure and Transportation - Phasing</p>	<p>Intensification in the Williamsville Main Street will take advantage of existing public infrastructure investments, including transportation access and municipal infrastructure. This portion of Princess Street currently benefits from local and express transit routes, as well as buffered bike lanes. Although infrastructure servicing capacity limitations prevent the immediate enactment of permissions for additional height in The Gateway Character Area, staff are recommending that once additional capacity becomes available, the area be up-zoned to allow greater height in support of efficient and economical infrastructure expansion.</p>
<p>2.7.1 Development and/or land use change must demonstrate that the resultant form, function and use of land are compatible with surrounding land uses.</p>	<p>Land Use Compatibility Principles – Compatible Development and Land Use Change</p>	<p>The changes proposed through this application relate to the appropriate built form of developments permitted in the Williamsville Main Street and their transition to adjacent properties and developments.</p>
<p>2.7.2 The demonstration of compatible development and land use change must consider the potential for adverse effects and matters that have the potential to negatively impact the character, planned function and/or ecological integrity of an area, and the health and safety of humans. Where</p>	<p>Land Use Compatibility Principles – Compatible Development and Land Use Change</p>	<p>The Official Plan's approach to land use compatibility is difficult to quantify and could be interpreted to discourage development that is in the public interest, in favour of existing development. The Density by Design project will be amending the land use compatibility policies of the Official Plan. In the meantime,</p>

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<p>there exists a potential for negative impacts, a land use compatibility study, focused specifically on the identified land use compatibility matters, will be required.</p>		<p>for the Williamsville Main Street, staff are recommending exempting this portion of the Princess Street Corridor from the policies of Section 2.7. This is because staff have already determined compatibility of the proposed permissions for the main street.</p>
<p>2.7.3 The land use compatibility matters to be considered under Section 2.7.2 include, but are not limited to:</p> <ul style="list-style-type: none"> <li>a. shadowing;</li> <li>b. loss of privacy due to intrusive overlook;</li> <li>c. increased levels of light pollution, noise, odour, dust or vibration;</li> <li>d. increased and uncomfortable wind speed;</li> <li>e. increased level of traffic that can disrupt the intended function or amenity of a use or area or cause a decrease in the functionality of active transportation or transit;</li> <li>f. environmental damage or degradation;</li> <li>g. diminished service levels because social or physical infrastructure necessary to support a use or area are overloaded.</li> <li>h. reduction in the ability to enjoy a property, or the normal amenity associated with it, including safety and</li> </ul>	<p>Land Use Compatibility Principles – Land Use Compatibility Matters</p>	<p>The Official Plan’s approach to land use compatibility is difficult to quantify and could be interpreted to discourage development that is in the public interest, in favour of existing development. The Density by Design project will be amending the land use compatibility policies of the Official Plan. In the meantime, for the Williamsville Main Street, staff are recommending exempting this portion of the Princess Street Corridor from the policies of Section 2.7. This is because staff have already determined compatibility of the proposed permissions for the main street.</p>



Policy	Category	Conformity with the Policy
<p>access, outdoor areas, heritage or setting;</p> <ul style="list-style-type: none"> <li>i. visual intrusion that disrupts the streetscape or buildings;</li> <li>j. degradation of cultural heritage resources;</li> <li>k. architectural incompatibility in terms of scale, style, massing and colour; or,</li> </ul> <p>the loss or impairment of significant views of cultural heritage resources and natural features and areas to residents.</p>		
<p>2.7.4 Mitigation measures may be used to achieve development and land use compatibility. Such measures may include one or more of the following:</p> <ul style="list-style-type: none"> <li>a. ensuring adequate setbacks and minimum yard requirements;</li> <li>b. establishing appropriate transition in building heights, coverage, and massing;</li> <li>c. requiring fencing, walls, or berming to create a visual screen;</li> <li>d. designing the building in a way that minimizes adverse effects;</li> <li>e. maintaining mature vegetation and/or additional new landscaping requirements;</li> <li>f. controlling access locations, driveways, service areas and activity areas; and,</li> <li>g. regulating location, treatment and size of</li> </ul>	<p>Land Use Compatibility Principles – Mitigation Measures</p>	<p>The Official Plan’s approach to land use compatibility is difficult to quantify and could be interpreted to discourage development that is in the public interest, in favour of existing development. The Density by Design project will be amending the land use compatibility policies of the Official Plan. In the meantime, for the Williamsville Main Street, staff are recommending exempting this portion of the Princess Street Corridor from the policies of Section 2.7. This is because staff have already determined compatibility of the proposed permissions for the main street.</p> <p>Most developments in the Williamsville Main Street will be subject to a site plan control agreement. This additional mechanism will be used to address site-specific design requirements to further aid in</p>

Policy	Category	Conformity with the Policy
<p>accessory uses and structures, lighting, parking areas, garbage storage facilities and signage.</p> <p>Planning Act tools including zoning bylaw standards, site plan control, development agreements and other measures will be used to implement mitigative measures that achieve compatible land use change and development.</p>		<p>the compatibility of the proposed project with the surrounding area.</p>
<p>3.4.1 Within the Princess Street Corridor and Centres shown on Schedule 2, the Commercial land use designation is intended to foster residential intensification, a pedestrian-focused mix of land uses, and support for transit and active transportation, in order to encourage more sustainable development.</p>	<p>Commercial Uses – Strategic Intent – Centres &amp; Corridors</p>	<p>The proposed policies maintain the requirement for ground floor commercial use throughout most of this section of the Princess Street Corridor, as illustrated on Schedule PS-1 in the Official Plan. They further require that commercial entrances on Princess Street, Division Street, Concession Street, and Bath Road are developed at grade with a minimum ground floor height of 4.5 metres to support their viability.</p>
<p>3.4.C.2 Permitted commercial uses include retail, service and office uses that are suitable for an accessible main street pedestrian format, and are intended to serve the surrounding neighbourhoods. For properties within a Main Street Commercial designation, land use on the ground floor is required to be commercial, unless otherwise identified in a Specific Policy Area of Section 10 of this Plan.</p>	<p>Main Street Commercial – Permitted Commercial Uses</p>	<p>The proposed policies maintain the requirement for ground floor commercial use throughout most of this section of the Princess Street Corridor, as illustrated on Schedule PS-1 in the Official Plan. Proposed permitted commercial uses include retail, office, service and medical/paramedical and educational, and community and social service uses.</p>

Policy	Category	Conformity with the Policy
<p>3.4.C.5 Within the Main Street Commercial designation, residential uses are permitted as upper storey uses. Ground floor residential uses may be permitted if identified in a Specific Policy Area of Section 10 of this Plan. Where ground floor residential uses are permitted, the building design must contribute to the pedestrian activity and amenity of the street and complement the commercial storefront design and character of the street. The height of the ground floor units must enable future conversions to commercial uses.</p>	<p>Main Street Commercial – Residential Uses</p>	<p>The proposed policies continue to permit ground floor residential uses in the central portion of the corridor and along the side streets off Princess Street, as illustrated on Schedule PS-1 in the Official Plan. The proposed provisions continue to require ground floors on Princess Street to be built to a minimum ground floor height of 4.5 metres, to enable conversion to commercial space if required in the future.</p>
<p>3.4.C.6 Community facilities and open space are also permitted in the Main Street Commercial designation. Specialized residential uses including senior citizen accommodation, boarding houses, special needs facilities, supportive housing, hostels and similar uses may be permitted by the zoning by-law.</p>	<p>Main Street Commercial – Other Permitted Uses</p>	<p>The proposed zoning by-law permits a variety of residential uses, including multiple family dwellings; row houses; and supportive housing and special needs housing.</p>
<p>3.4.C.7 All new development or conversions will be required to provide parking for vehicles and bicycles in accordance with the zoning by-law and will be encouraged to locate parking underground or in structures. If it is not possible to locate sufficient parking on site, parking may be provided offsite, at a distance</p>	<p>Main Street Commercial – Parking</p>	<p>The proposed policies recommend a minimum number of residential parking spaces of 0.4 per dwelling unit and a maximum number of residential parking spaces of 1.0 per dwelling unit.</p>

Policy	Category	Conformity with the Policy
<p>stipulated in the zoning by-law, through long-term agreements registered on title to both properties. Cash-in lieu of parking may be accepted by Council in accordance with Section 9.5.11 of this Plan, where it is not feasible to provide on-site parking.</p>		
<p>3.4.C.8 The Williamsville Main Street, extending between the westerly limit of the Central Business District at Division Street and the Kingston Centre, is a major component of the Princess Street Corridor, as shown on Schedule 2. It is intended to be a focus of development in a pedestrian-oriented form that will provide support for the Princess Street transit corridor and more sustainable means of growth. The Williamsville Main Street is part of the Princess Street Corridor Specific Policy Area and is shown on Schedule PS-1 of this Plan.</p>	<p>Main Street Commercial – Williamsville</p>	<p>The proposed policy changes will support the development of a pedestrian oriented form along the corridor by increasing the required setback from the street to allow more space for the widened pedestrian realm recommended by the Study, as well as the street trees, benches, and active commercial frontages. Further, by allowing for greater intensification within this existing transit Corridor and requiring ground floor commercial uses, the proposed policy changes are favourable for pedestrian oriented development.</p>
<p>3.4.C.9 New development within the Williamsville Main Street shall be consistent with the Williamsville Main Street Study (2012), which provides urban design guidelines for the area and shall conform to the policies for the Princess Street Corridor Specific Policy Area: Williamsville Main Street in Section 10E of this Plan.</p>	<p>Main Street Commercial – Williamsville</p>	<p>Section 3.4.C.9 is proposed to be deleted and replaced with “New development within the Williamsville Main Street is directed by the Williamsville Main Street Study (2012) and Addendum (2020), which provide specific design direction and are further detailed in the policies for the Princess Street Corridor Specific Policy Area: Williamsville Main Street in Section 10E.1 of this Plan.”</p>

Policy	Category	Conformity with the Policy
<p>4.1.1 New development will proceed only if the City is satisfied that adequate services, roads, and utilities are available, or can be made available, to serve the proposal adequately. In determining the adequacy of servicing, utility systems, or the transportation system, the City will consider not only the proposal, but also the potential for development that exists in the same service area.</p>	<p>General Policies – New Development</p>	<p>New Development in the Williamsville Main Street will take advantage of existing municipal infrastructure investments. Although infrastructure servicing capacity limitations prevent the immediate enactment of permissions for additional height in the Gateway character area, staff are recommending that once additional capacity becomes available, the area be up-zoned to allow greater height in support of efficient and economical infrastructure expansion.</p> <p>As part of future site plan control applications for properties within the main street, applicants will be required to submit a servicing report and servicing plan to demonstrate the adequacy of servicing. A transportation analysis may also be required at the site plan control stage.</p>
<p>4.1.2 Limitations in the capacity of service or utility systems or of the transportation system will be recognized as effectively constraining the timing of proposed development.</p>	<p>General Policies – Capacity Limitations</p>	<p>Should limitations in capacity of service or utility or transportation system be identified at the site plan control stage based on studied submitted at that time and in consultation with service providers, Planning Services' will recommend deferral of the application until such time that sufficient servicing capacity exists.</p>
<p>4.6.5 Sidewalks and active transportation pathways must be designed to provide direct access from the interior of</p>	<p>Transportation – Improved Connections</p>	<p>Local and express transit stops are located across the Williamsville Main Street on Princess Street. The proposed</p>

Policy	Category	Conformity with the Policy
neighbourhoods to transit locations, and to connect commercial properties in order to encourage active transportation.		policy changes will continue to improve pedestrian connectivity to transit stops and commercial properties by requiring an increased setback from the street to allow more space for a widened pedestrian realm.
4.6.6 The City supports the development of convenient, accessible and appealing streetscapes through such measures as providing wide sidewalks, street furniture, trees and amenities, including convenient transit stops.	Transportation – Pedestrian Friendly Streetscapes	The proposed policy changes will support the development of a pedestrian oriented form along the corridor by increasing the required setback from the street to allow more space for the widened pedestrian realm recommended by the Study, as well as the street trees, benches, and active commercial frontages.
4.6.7 The City supports the location of street front retail and personal service shops adjacent to the sidewalk in commercial areas.	Transportation – Pedestrian Friendly Streetscapes	The proposed policies maintain the requirement for ground floor commercial use throughout most of the Williamsville Main Street, as illustrated on Schedule PS-1 of the Official Plan. Proposed permitted commercial uses include retail, office, service and medical/paramedical and educational, and community and social service uses. They further require that commercial entrances on Princess Street, Division Street, Concession Street, and Bath Road are developed at grade with a minimum ground floor height of 4.5 metres to support their viability.
4.6.8 Improving connections between schools, recreational facilities, shopping areas, and	Transportation – Pedestrian Friendly Streetscapes	The proposed policy changes will continue to promote improved connections between schools, recreational facilities,

Policy	Category	Conformity with the Policy
Employment Areas is promoted.		shopping areas, and Employment Areas, such as the Downtown, Queen’s University, and Kingston Memorial Centre.
4.6.10 Improving connections between active transportation and transit will be required through such means as improved pedestrian amenities, connected on and off street cycling routes, bicycle storage, improved transit routing and amenities, and such site plan control matters as locating building entrances near sidewalks and transit stops, and providing weather protection for people using all modes of travel including transit users.	Transportation – Active Transportation and Transit – Intermodal Improvements	<p>Considerations will be provided at the site plan control stage for development proposals within the Study Area to improve connections between active transportation and transit, including the location of bicycle parking, pedestrian amenities, and building entrances and identifying opportunities to provide weather protection for peoples using all modes of travel.</p> <p>The next phase of the transportation work for the main street will also examine improvements for connectivity and access in this portion of the Princess Street Corridor.</p>
<p>7.1.10 Conserving built heritage resources forms an integral part of the City’s planning and decision-making. The City uses the power and tools provided by legislation, policies and programs, particularly the Ontario Heritage Act, the Planning Act, the Environmental Assessment Act and the Municipal Act in implementing and enforcing the policies of this Section. This may include the following:</p> <p>a. designating real property under Part IV, or V of the Ontario Heritage Act, or</p>	Built Heritage – Conservation of Built Heritage	<p>The proposed polices recommend maintaining the protection of important cultural heritage resource in the Williamsville Main Street and continuing to identify and protect heritage resources adjacent to the Corridor, focusing on side streets.</p> <p>For development proposals on a protected heritage property, the submission of a Heritage Impact Assessment will be required and reviewed by Heritage Planning Staff in advance of issuing Site Plan Control approval.</p>



Policy	Category	Conformity with the Policy
<p>encouraging the Province to designate real property under Part VI of the Ontario Heritage Act;</p> <p>b. requiring, as a condition of any approval, the retention of any built heritage resources found within a plan of subdivision, a plan of condominium, or on any parcel created by consent, or other land division approval;</p> <p>c. using zoning by-law provisions as appropriate, to conserve identified built heritage resources;</p> <p>d. using the provisions of Section 37 of the Planning Act in order to maintain the integrity of identified built heritage resources;</p> <p>e. using site plan control provisions of Section 41 of the Planning Act to ensure that new development on adjacent properties is compatible with the adjacent identified built heritage resources;</p> <p>f. using design guidelines to provide for sympathetic development of adjacent lands that are not designated, but which could impact the site of the built heritage resource;</p> <p>g. ensuring that archaeological resources are evaluated and conserved prior to any ground disturbance, in accordance with the City's</p>		<p>For development proposals on adjacent lands to a protected heritage property, the submission of a Heritage Impact Assessment will be required and reviewed by Heritage Planning Staff in advance of issuing Site Plan Control approval to demonstrate that the heritage attributes of the protected heritage property will be conserved.</p> <p>On any property identified in the City's Archaeological Master Plan as having archaeological potential, the completion of an archaeological assessment will be required and reviewed by Heritage Planning Staff in advance of issuing Site Plan Control approval.</p>

Policy	Category	Conformity with the Policy
<p>Archaeological Master Plan and provincial regulations;</p> <p>h. in partnership with Kingston’s Indigenous Peoples of Canada community, a Protocol outlining the working relationship with them and the City will be designed, approved and implemented; and</p> <p>i. using heritage easements as a means to protect significant built heritage resources, where appropriate.</p>		
<p>8.1 The City recognizes the value associated with quality architecture, pedestrian-friendly streetscapes, and vibrant neighbourhoods. For these reasons, the City may undertake urban design guidelines for specific types of development, for specific areas of the City or for the entire City. Any urban design guidelines that are developed will be used to:</p> <p>a. clarify the strategic direction and design objectives of the Official Plan;</p> <p>b. complement and enhance any design considerations in development applications;</p> <p>c. assist in the preparation of any future secondary plan, community improvement plan, or other relevant planning documents; and,</p>	<p>Urban Design – Urban Design Guidelines</p>	<p>The preparation of design guidelines for tall and mid-rise buildings in the City (Density by Design) is currently underway. The proposed policy changes are consistent with the preliminary recommendations of Density by Design. The built form in this area will be regulated through the implementing Official Plan policies and zoning by-law provisions.</p>

Policy	Category	Conformity with the Policy
d. assist the City in evaluating development proposals.		
<p>9.3.2 Every application for amendment to this Plan will be evaluated on the basis of the following general considerations and any others that are pertinent to the particular application:</p> <ul style="list-style-type: none"> <li>a. the conformity of the proposed amendment to the general intent and philosophy of this Plan, particularly the vision and planning principles, including sustainability, stability and compatibility outlined in Section 2, and consistency with provincial policy;</li> <li>b. the availability and suitability of land already designated for the proposed use, and the need for (or market feasibility of) the proposed use;</li> <li>c. the compatibility of the proposal, or the adequacy of proposed mechanisms for achieving compatibility, with adjacent and planned uses, including cultural heritage resources and natural heritage features and areas;</li> <li>d. the potential of the proposal to cause instability within an area intended to remain stable;</li> <li>e. the ability of the City's infrastructure to accommodate the proposal without costly</li> </ul>	<p>Official Plan Amendment Criteria</p>	<ul style="list-style-type: none"> <li>a. The proposed changes to the Official Plan for the Williamsville Main Street are consistent with the Provincial Policy Statement and with Section 2 of the Official, including with regards to housing, intensification, efficient use of land and infrastructure, multi-modal transportation networks, protection of cultural heritage resources, and promoting and protecting main streets.</li> <li>b. The lands themselves within this portion of the Princess Street Corridor are already designated Main Street Commercial. Some minor changes to the boundaries are proposed to align the Official Plan designation with the zoning and to make corrections where the designation currently cuts through the middle of a property. The ability of the Williamsville Main Street to accommodate additional residential units supports the results of the City's recent Population, Housing and Employment Projections.</li> <li>c. The changes proposed to the built form policies of the Official Plan are intended to achieve greater compatibility between new</li> </ul>

Policy	Category	Conformity with the Policy
<p>expansion, upgrading, or required deferral of other planned infrastructure improvements in other areas of the City;</p> <p>f. the financial implications (both costs and revenues) to the City;</p> <p>g. the degree to which approval of the amendment would establish an undesirable precedent; and,</p> <p>h. consistency with the Provincial Policy Statement and provincial legislation and guidelines.</p>		<p>developments on the main street and adjacent properties in the surrounding neighbourhood, including any cultural heritage resources.</p> <p>d. The Princess Street Corridor is not an area intended to remain stable, because it is identified in the Official Plan as an area to be target for intensification, and therefore intended to see grow and change. The proposed changes to the policies for the Williamsville Main Street though this amendment will improve the design of new buildings in the main street and their transition to adjacent properties, including those in the neighbouring residential areas.</p> <p>e. With respect to transportation, the corridor can support the potential growth in the short term. Additional work on the transportation study is forthcoming, which will look at capacity and connectivity for all modes of transportation for the main street, especially as it relates to long term development. Adequate water and sanitary sewer services are planned. A holding symbol will remain on the zoning until such time as the next phase of</p>

Policy	Category	Conformity with the Policy
		<p>the Princess Street reconstruction is complete. Additional works may be needed in the future to allow additional lands in The Gateway Character Area to develop at a greater intensity.</p> <p>f. There are no capital costs associated with this amendment. Capital planning for future infrastructure upgrades will be required, subject to the outcome of additional studies and work by staff.</p> <p>g. The proposed changes are in line with the strategic intent of the Official Plan for the Princess Street Corridor to be an area targeted for intensification and will therefore not create an undesirable precedent.</p> <p>h. The proposed changes to the Official Plan for the Williamsville Main Street are consistent with the Provincial Policy Statement, including with regards to housing, intensification, efficient use of land and infrastructure, multi-modal transportation networks, protection of cultural heritage resources, and promoting and protecting main streets.</p>
<p>9.5.9 When considering an application to amend the zoning by-law, the Planning Committee and Council will</p>	<p>By-Laws – Planning Committee/Council Considerations</p>	<p>a. The proposed amendment for the Williamsville Main Street conforms to the intent of the Official Plan,</p>

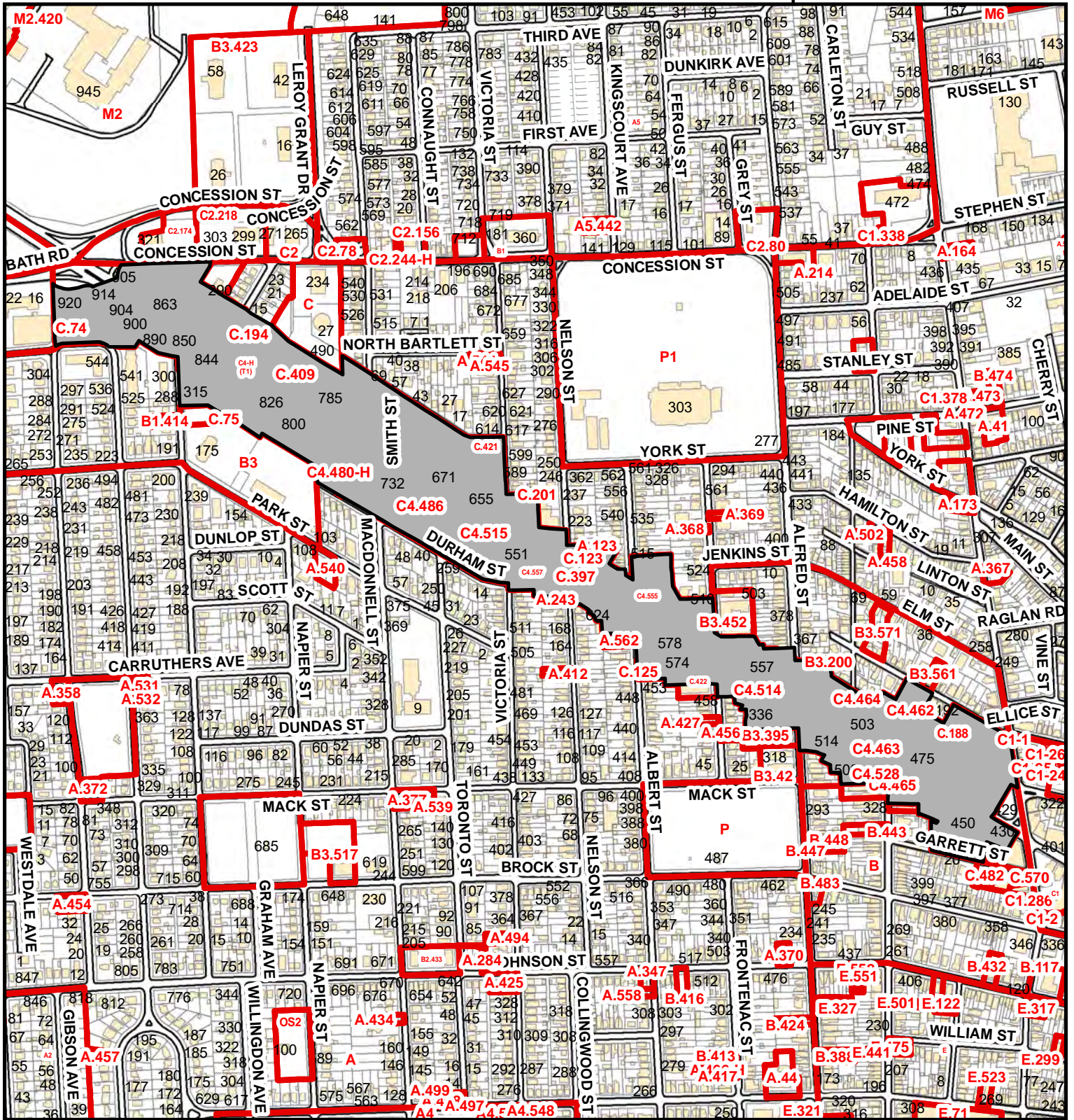
Policy	Category	Conformity with the Policy
<p>have regard to such matters as:</p> <ul style="list-style-type: none"> <li>a. conformity of the proposal with the intent of the Official Plan polices and schedules;</li> <li>b. compatibility of the proposal with existing uses and zones, sensitive uses, the natural heritage system, cultural heritage resources, and compatibility with future planned uses in accordance with this Plan;</li> <li>c. compatibility of proposed buildings or structures with existing buildings and structures, with zoning standards of adjacent sites, with any future planned standards as provided in this Plan, and with any urban design guidelines adopted by the City for the area;</li> <li>d. the extent to which the proposal is warranted in this location and the extent to which areas zoned for the proposed use are available for development;</li> <li>e. the suitability of the site for the proposal, including its ability to meet all required standards of loading, parking, open space or amenity areas;</li> <li>f. the suitability of the density relative to the neighbourhood and/or district, in terms of units per hectare, bedrooms per hectare, floor space index,</li> </ul>		<p>including with regards to housing, intensification, efficient use of land and infrastructure, multi-modal transportation networks, protection of cultural heritage resources, and promoting and protecting main streets.</p> <ul style="list-style-type: none"> <li>b. The changes proposed to the built form provisions of the zoning by-law are intended to achieve greater compatibility between new developments on the main street and adjacent properties in the surrounding neighbourhood, including any cultural heritage resources.</li> <li>c. The proposed changes to the zoning provisions for the Williamsville Main Street though this amendment will improve the design of new buildings in the main street and their transition to adjacent properties, including those in the neighbouring residential areas.</li> <li>d. The lands within this portion of the Princess Street Corridor are already designated Main Street Commercial. Some minor changes to the boundaries are proposed to align the Official Plan designation with the zoning and to make corrections where the designation currently cuts through the middle of a</li> </ul>

Policy	Category	Conformity with the Policy
<p>and/or employees per hectare, as applicable;</p> <p>g. the impact on municipal infrastructure, services and traffic;</p> <p>h. comments and submissions of staff, agencies and the public; and,</p> <p>i. the degree to which the proposal creates a precedent.</p>		<p>property. The ability of the Williamsville Main Street to accommodate additional residential units supports the results of the City’s recent Population, Housing and Employment Projections. While there may be other areas of the City that will support intensification as well, not all of them may be as “shovel-ready” with respect to infrastructure.</p> <p>e. New development projects will be reviewed against the proposed changes to the zoning provisions.</p> <p>f. The density proposed for the Williamsville Main Street is appropriate given the strategic intent of the Official Plan for the Princess Street Corridor to be the focus of intensification projects. The additional residential units that can be accommodated in the Williamsville Main Street is supported by the results of the City’s recent Population, Housing and Employment Projections.</p> <p>g. With respect to transportation, the corridor can support the potential growth in the short term. Additional work on the transportation study is forthcoming, which will look at capacity and connectivity for all modes of transportation for the main street, especially as it</p>



Policy	Category	Conformity with the Policy
		<p>relates to long term development. Adequate water and sanitary sewer services are planned. A holding symbol will remain on the zoning until such time as the next phase of the Princess Street reconstruction is complete. Additional works may be needed in the future to allow additional lands in The Gateway Character Area to develop at a greater intensity.</p> <p>h. All comments have been addressed as part of Report Number PC-20-065.</p> <p>i. The proposed changes are in line with the strategic intent of the Official Plan for the Princess Street Corridor to be an area targeted for intensification and will therefore not create an undesirable precedent.</p>
<p>Section 10E.1 – Princess Street Corridor Specific Policy Area: Williamsville Main Street</p> <p>All of the policies of this section of the Official Plan are being reviewed as part of the update to the Williamsville Main Street Study. A copy of the proposed changes to the policies is available as part of the Addendum to the Williamsville Main Street Study (Exhibit K to Report Number PC-20-065).</p>		





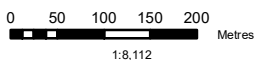
Planning Services  
a department of  
Community  
Services

PLANNING COMMITTEE  
**Existing Zoning - By-law 8499, Map 20**

File Number: D35-003-2020  
Address: Williamsville Main Street Corridor

**Legend**

- Subject Lands
- Consolidated\_Zoning





# WILLIAMSVILLE MAIN STREET STUDY ADDENDUM

## 572-574 PRINCESS ST & 464 FRONTENAC ST

1

August 12, 2020

**Ms. Andrea Gummo**

Acting Manager, Policy Planning  
City of Kingston  
1211 John Counter Blvd  
Kingston, ON K7K 6C7

Via Email: [agummo@cityofkingston.ca](mailto:agummo@cityofkingston.ca)

**RE: Williamsville Main Street Study Addendum  
572-574 Princess Street & 464 Frontenac Street**

Dear Ms. Gummo,

Fotenn Planning + Design has been retained by King's Town Development Corporation (KTDC) to provide this comment letter on their behalf regarding the draft Addendum to the Williamsville Main Street Study and related draft Official Plan and zoning by-law amendments. The following commentary is specific to the interests of KTDC and the policies related to the subject property, located at 572-574 Princess Street and 464 Frontenac Street. The purpose of this letter is to provide formal comment related to the proposed policy and regulatory changes affecting the subject site as set out in the Draft Addendum to the Williamsville Main Street Study and its appendices.



Figure 1: Subject Site (572-574 Princess Street and 464 Frontenac Street) (Source: K-Maps)

Fotenn, on behalf of our client, attended a meeting with City staff to discuss the then-recently released Density by Design Issues and Options Report. At the time, City staff had combined the land use study required by the Interim

Control By-law (2019-073) with the ongoing Density by Design exercise regarding mid-rise and tall buildings in the City of Kingston. A subsequent letter dated March 5, 2020 was submitted on our client's behalf.

The purpose of our consultation was to discuss with Planning Staff the appropriateness of including the entirety of the subject property within the Williamsville Main Street Study Area and to emphasize the intensification potential of the subject site.

We have reviewed the draft Addendum and draft Official Plan and zoning by-law amendments and we are disappointed that the requests from our previous consultation have not been considered or responded to by City staff. We recognize that only a portion of the subject site is within the Specific Policy Area boundary and that this portion has been identified as a location that could support no more than six storeys. We are concerned that the request to include the entirety of the subject site within the Williamsville Main Street Area has been ignored and that no response was provided to the request to identify the subject site as an appropriate location for additional height and density.

#### 464 Frontenac Street

The 464 Frontenac Street site should be included within the Williamsville Main Street Specific Policy Area. This property was previously consolidated with the abutting Princess Street properties (572-574 Princess Street) owned by KTDC prior to an extensive rezoning process. The property was rezoned to a single site-specific Commercial Uses (Central Business District and Upper Princess Street) (C.422) Zone. A provision of the site-specific zoning states "*The properties within this zone shall be treated as a single parcel for the purpose of zone interpretation*". Therefore, the subject site, including 572-574 Princess Street and 464 Frontenac Street, despite multiple municipal addresses, has been zoned to function as a single parcel of land. Per the site's zoning, the current density requirement of 123 dwelling units per net hectare applies to the entirety of the property. As well, the parking for 464 Frontenac Street is shared with 572 and 574 Princess Street.

We also note that a similar situation exists north of Princess Street on the east side of Albert Street. The 505 and 513 Albert Street properties, which contain stacked and back-to-back townhouses similar to that built at 464 Frontenac Street, are located within the Study Area even though these are on a property which has no frontage on Princess Street and they were included in the Study Area at the time that development applications were in progress to redevelop them with the current use and built form.

464 Frontenac Street and 572-574 Princess Street are one parcel of land. It is illogical to fail to include the entire subject site within the Williamsville Main Street Specific Policy Area and leave a split policy designation on the site. We note as well that staff are recommending the inclusion of other lands at the northwest and southwest corner of Division Street and Princess Street, including site that do not front onto Princess Street as "[...] *there may be a stronger relationship with the Williamsville Main Street corridor* [...]".

**We reiterate our request that the 464 Frontenac Street site be included within the boundary of the Williamsville Main Street Specific Policy Area.**

#### Height and Density on the Subject Site

We would also like to express our concern regarding the approach taken in the draft Addendum and Official Plan and zoning by-law amendments to set a maximum height of six storeys throughout the majority of the corridor.

Under the current Williamsville Main Street policy framework, the main parameter for considering increased height or density on a site is a lot depth of 36 metres or greater from Princess Street as well as qualitative measures to ensure that possible adverse effects on other land uses are mitigated and that a minimum of five hours of sunlight is maintained in the public realm. The original study effectively asserted that sites with a lot depth of 36 metres or greater from Princess Street *could be* appropriate for additional height and density, subject to demonstrating

compatibility. The draft Addendum and Official Plan amendment will remove this development potential entirely, limiting the maximum height to six storeys while also removing the requirement to demonstrate land use compatibility. This proposed change has the effect of reducing the development potential for sites that are otherwise, under the current policy framework, suitable and appropriate for consideration of taller buildings.

The subject site has a lot depth varying between approximately 60 and 75 metres. The distance from Princess Street to the existing stacked townhouse building is approximately 38-40 metres, which would therefore qualify as a site which could accommodate greater height and density under the current policy framework. Any development proposal would be required to demonstrate land use compatibility and conformity with other policies in the Williamsville Main Street Specific Policy Area.

It is our opinion that the Addendum to the Williamsville Main Street Study and its implementing policy and regulatory tools should continue to provide criteria related to the location of taller building sites in Williamsville, along with detailed policy tools to ensure that development applications will be compatible, rather than the broad-strokes approach presented in the draft Addendum which has been demonstrated by the financial feasibility study prepared by Watson and Associates to be economically non-viable.

The subject site is a corner property in an area of Williamsville that is well-suited for intensification and located opposite an approved 10-storey building development. The site is well-connected, served by public transit, conducive to pedestrian travel, within proximity to a range of amenities and employment opportunities, and located on a major transportation route along the Princess Street corridor. Permitting the redevelopment of this site through the incorporation of taller buildings will provide additional street level area to foster the creation of a vibrant public realm. It should also be emphasized that the subject site is a corner lot containing a single storey building, a two-storey building, and a three-storey building fronting on Frontenac Street. The subject site provides the opportunity to create an appropriate transition zone through the existence of the three-storey downtown development, to surrounding single family residential uses. The shape of the property is fairly regular and represents about half the streetscape between Frontenac and Albert Street. The subject site provides a suitable location for intensification in the form of tall buildings that makes efficient use of existing infrastructure while further contributing to the vitality of the surrounding community.

**We therefore request that the subject site, 572-574 Princess Street and 464 Frontenac Street, be recognized as an appropriate location for increased height and density and be included in the Official Plan amendment and zoning by-law amendment, subject to further consultation with our office and the landowners. Our office will be prepared to prepare draft by-laws if it would be of assistance.**

### Summary

We require the City to provide consideration and responses for:

1. We request that the entirety of the subject site, 572-574 Princess Street and 464 Frontenac Street, be included in the boundary of the Williamsville Main Street Area;
2. We request that the subject site, 572-574 Princess Street and 464 Frontenac Street, be recognized as an appropriate location for increased height and density;
3. We request that the subject site, 572-574 Princess Street and 464 Frontenac Street, be included within the boundary of the proposed Official Plan and zoning by-law amendments.

In the interests of transparency, should the City choose not to include 464 Frontenac Street within the boundary of the Williamsville Main Street Area through the implementing Official Plan and zoning by-law amendments, King's Town Development Corporation (KTDC) will appeal the applications to the Local Planning Appeals Tribunal.

We would be pleased to meet with City staff and the consulting team to further discuss our comments. Should you have any questions or comments, please do not hesitate to contact the undersigned at [REDACTED]

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or [REDACTED] We also ask to be notified of status updates related to these applications, as well as of any decision made by Council.

Respectfully submitted,



Mike Keene, MCIP RPP  
Principal, Planning and Development  
Fotenn Planning + Design

Cc: King's Town Development Corp.



# WILLIAMSVILLE MAIN STREET STUDY ADDENDUM 1

## 641-647 PRINCESS ST, 577 VICTORIA ST & 236 NELSON ST

August 11, 2020

**Ms. Andrea Gummo**

Acting Manager, Policy Planning  
City of Kingston  
1211 John Counter Blvd  
Kingston, ON K7K 6C7

Via Email: [agummo@cityofkingston.ca](mailto:agummo@cityofkingston.ca)

**RE: Williamsville Main Street Study Addendum  
641-647 Princess Street, 577 Victoria Street & 236 Nelson Street**

Dear Ms. Gummo,

Fotenn Planning + Design has been retained by Mike Scrannage, Karen Charlton, and the Anglican Diocese of Ontario to provide this comment letter on their behalf regarding the draft Addendum to the Williamsville Main Street Study and related draft Official Plan and zoning by-law amendments. The following commentary is specific to the interests of their properties located at 641-647 Princess Street, 577 Victoria Street (for Mike Scrannage and Karen Charlton) and 236 Nelson Street (for the Anglican Diocese). The purpose of this letter is to provide formal comment related to the proposed policy and regulatory changes affecting the subject lands as set out in the Draft Addendum to the Williamsville Main Street Study and its appendices.



Figure 1: 641-647 Princess Street, 577 Victoria Street and 236 Nelson Street (Source: K-Maps)

Fotenn, on behalf of our clients, attended a meeting with City staff on January 7, 2020 to discuss the then-recently released Density by Design Issues and Options Report. At the time, City staff had combined the land use study



required by the Interim Control By-law (2019-073) with the ongoing Density by Design exercise regarding mid-rise and tall buildings in the City of Kingston.

The purpose of our consultation was to discuss with Planning staff the appropriateness of including 236 Nelson Street in the Williamsville Main Street Study Area as well as to demonstrate the development potential of the consolidated subject lands, highlighting their appropriateness as a location for additional height and density under the current policy framework. We also discussed that the potential of the two sites when viewed together, is greater than their individual potential, particularly when heritage conservation measures are factored into any development potential.

We have reviewed the draft Addendum and draft Official Plan and zoning by-law amendments. It is disappointing that the draft Official Plan amendment fails to incorporate 236 Nelson Street (home of St. Luke's Church) into the Williamsville Specific Policy Area given the property's role in the study area as well as in the consultation process to-date. We are also disappointed in the direction taken by staff in failing to recognize the subject site as one that would be suitable to support a taller building than the six storey proposed as the new universal height of the Williamsville Main Street.

### **236 Nelson Street**

The 236 Nelson Street property has an important relationship with Williamsville, as a relatively large parcel adjacent to the existing corridor, as the site of community consultation for this very project, and as a property with frontage on one of the designated Green Streets.

The St. Luke's Church property, known municipally as 236 Nelson Street, abuts on several properties that are within the Williamsville Main Street Study Area. The property has approximately 50 metres of frontage on a designated Green Street, occupying a significant portion (approximately one-third) of the potentially "green-able" frontage on the west side of Nelson Street.

The Anglican Diocese is planning for the future of the St. Luke's congregation. It is anticipated that St. Luke's will be required to close its doors and the property re-purposed or sold. Once the church is declared surplus, this will leave a large underutilized parcel abutting the Williamsville Main Street Study Area. If the property is not included within the Specific Policy Area, it will be subject to the standard criteria for redevelopment set out in the Official Plan and is unlikely to achieve its full potential or to respond suitably to the policies in the Williamsville Main Street Specific Policy Area. Including the property within the study area by incorporating it into the Official Plan and zoning by-law amendments, represents a logical and appropriate means of ensuring that the inevitable redevelopment of the property aligns with the policy and urban design direction set out for the Williamsville Main Street.

The boundary of the Williamsville Main Street Study Area has been inconsistently defined as it relates to side streets, such as Nelson Street. There are instances where the first property immediately to the north or south of one which fronts onto Princess Street is included in the study area, and others where this is not the case. There are instances where the Study Area boundary arbitrarily cuts through a row of townhouses with no discernable consideration for the existing built form or the traditional relationships between properties. Through the proposed Official Plan and zoning by-law amendments for example, it is also proposed to incorporate certain properties at the northwest and southwest corners of the Division Street and Princess Street intersections, including properties that front onto Garrett Street but have no direct relationship with Princess Street or Division Street.

As the City is wisely considering revising the boundary for the Specific Policy Area, it is appropriate to incorporate other properties into the Williamsville Main Street where it is logical to do so. It is appropriate and necessary to bring 236 Nelson Street into the Williamsville Main Street Study Area in order to support the continued development and redevelopment of the area and to support the redevelopment, infill and intensification of underutilized parcels of land. Incorporating this property will also support the City's goals for implementing the Green Street policy along Nelson Street.

**We strongly encourage the City to include 236 Nelson Street within the boundary of the Williamsville Main Street Study Area.**

### Height and Density on the Consolidated Parcels

We are concerned with the approach proposed in the draft Addendum and the Official Plan and zoning by-law amendments regarding applying a maximum height of six storeys throughout Williamsville and not allowing or recognizing increased height except at the intersection of Division Street and Princess Street. We disagree with the approach of prohibiting new, tall building sites other than at the above-noted intersection. The subject properties collectively represent a site that, under the current framework, would be highly appropriate and suitable for redevelopment as a taller building site due to the depth of the properties relative to Princess Street as well as their significant frontage along three streets (Victoria Street, Princess Street and Nelson Street).

The approach presented in the draft documents fails to respond to fundamental and real aspects of the technical studies prepared, the existing built form, and the goals of the study. It is simply not realistic to expect that the Williamsville Main Street will be fully redeveloped as a six-storey corridor. The financial feasibility study prepared by Watson and Associates, for example, concluded that the six-storey height is simply not financially viable in this area. Ordinarily, this type of conclusion would result in a complete re-examination of the intended policy framework to achieve financial viability. It is anticipated that a mix of taller and shorter buildings, as proposed in the original study, would likely be more financially viable than the proposed six-storey maximum throughout the Main Street.

The subject lands are of sufficient area and dimension to accommodate a taller building with mitigation measures to address compatibility considerations with neighbouring properties to the north. The properties are also at an intersection which is made prominent by the existing and under-construction developments at 652 and 655 Princess Street. The subject lands are an appropriate location for additional height and density in order to complement the existing tall buildings and those currently under construction.

**We request that the subject lands, 641-647 Princess Street, 577 Victoria Street and 236 Nelson Street, be recognized as an appropriate location for increased height and density and/or that criteria be provided to continue to recognize suitable sites for taller buildings.**

### Summary

On our clients' behalf, we request that:

1. 236 Nelson Street be included within the Williamsville Main Street Area; and
2. The subject lands be recognized as an appropriate location for increased height and density or that criteria for the same be provided through this update to the Williamsville Main Street Study.

We would be pleased to meet with City staff and the consulting team to further discuss our comments. Should you have any questions or comments, please do not hesitate to contact the undersigned at [REDACTED]. We also ask to be notified of status updates related to these applications, as well as of any decision made by Council.

Respectfully submitted,



Youko Leclerc-Desjardins, MCIP RPP  
Senior Planner  
Fotenn Planning + Design

# WILLIAMSVILLE MAIN STREET STUDY ADDENDUM

## 170 COLBORNE ST

1

August 12, 2020

**Ms. Andrea Gummo**

Acting Manager, Policy Planning  
City of Kingston  
1211 John Counter Blvd  
Kingston, ON K7K 6C7

Via Email: [agummo@cityofkingston.ca](mailto:agummo@cityofkingston.ca)

**RE: Williamsville Main Street Study Addendum  
170 Colborne Street**

Dear Ms. Gummo,

Fotenn Planning + Design has been retained by Cogeco Connexion to provide this comment letter on their behalf regarding the draft Addendum to the Williamsville Main Street Study and related draft Official Plan and zoning by-law amendments. The following commentary is specific to the interests of Cogeco Connexion and the policies related to their property located at 170 Colborne Street. The purpose of this letter is to provide formal comment related to the proposed policy and regulatory changes affecting the subject site as set out in the Draft Addendum to the Williamsville Main Street Study and its appendices.



Figure 1: 170 Colborne Street property (source: K-Maps)

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Fotenn, on behalf of the client, attended a meeting with City staff on January 30, 2020 to discuss the then-recently released Density by Design Issues and Options Report. At the time, City staff had combined the land use study required by the Williamsville Main Street Interim Control By-law (2019-073) with the ongoing Density by Design exercise regarding mid-rise and tall buildings in the City of Kingston. It is understood that due to the limited timeframe of the Interim Control By-law, these important policy projects have now been separated to allow the land use study for Williamsville to proceed in advance of Density by Design.

The purpose of our consultation was to make Planning staff aware of the development potential of the subject property, highlighting its appropriateness as a location for additional height and density given its size, dimensions and location, as well as the property owner's interest in maintaining its development potential through the policy review undertaken by the City. Through this consultation, we noted that the subject property had been excluded from the Williamsville Main Street Study boundary but that it had been included in the Williamsville Main Street Specific Policy Area and the Main Street Commercial designations in the Official Plan amendment that implemented the original Williamsville Main Street Study.

We have reviewed the draft Addendum and draft Official Plan and zoning by-law amendments. We acknowledge that the draft Official Plan policies propose to recognize this site as a location that could support additional building height up to 60 metres in the form of a six-storey podium with a 14-storey residential tower, provided that the footprint of the tower be limited to 790 square metres. We applaud the approach of pre-designating this property as a site for increased height and support its inclusion in the height map provided with the draft Official Plan Amendment as a location where a maximum height of 14 storeys is appropriate. **We request that this property continue to be recognized as a site suitable for a 14-storey building in subsequent iterations of the draft policy framework.**

We would also, however, like to express concern with the proposed zoning by-law amendment. Section 1.3 of the Official Plan states that its policies are intended to be implemented through various mechanisms, including the zoning by-law. The proposed Official Plan amendment identifies this subject site as suitable for a 14-storey building. The proposed zoning by-law amendment does not seek to change the zoning on the subject site to implement the proposed Official Plan amendment.

Currently, the subject site is zoned site-specific Commercial Uses (Central Business District and Upper Princess Street) Zone (C.188). The maximum building height in the current zoning is a function of street width, yard setback and angular plane, a tool which is proposed to be removed from the Williamsville Study Area altogether. The zoning also restricts maximum residential density to 123 dwelling units per net hectare and total floor area of all buildings to 2,800 square metres. The site-specific zoning further limits the number and nature of permitted uses on the site. Within the current and proposed (i.e. unchanged) zoning framework, the subject property would require a zoning by-law amendment to achieve its full potential under the proposed Official Plan policies.

Section 9.6 of the Addendum to the Williamsville Main Street Study notes that “[...] *staff are recommending exempting the corridor from the policies of 2.7. This is because staff have already determined compatibility of the proposed permissions for the corridor.*” As staff have already determined that the subject site is suitable for a six-storey podium and 14-storey tower, we are of the opinion that the logical approach is to apply the amended Williamsville zoning to the subject site to implement the policy direction in the proposed Official Plan Amendment instead of requiring the property owner to undertake a costly and lengthy exercise of rezoning the site to implement the policy direction of the Addendum.

The current zoning is not in conformity with the proposed Official Plan amendment to allow a maximum building height of 14 storeys, with a six-storey podium. The proposed zoning by-law amendment fails to apply the relevant Official Plan policy to the subject site and therefore does not fulfill the intent of the zoning by-law as expressed in the Official Plan.

**We therefore request that the subject site be included in the zoning by-law amendment and that an appropriate C4-H(T1) zone be applied to the lands, subject to further consultation with our office and the landowner. Our office will be prepared to prepare a draft by-law if it would be of assistance.**

We also ask for further clarification regarding the intended 25-metre separation between residential towers which is included in the Official Plan amendment but not the zoning by-law amendment. The documents note that the separation will be required, “*measured from the two closest points between the towers.*” Since the road allowance of Princess Street and the required front yard setbacks will ensure that this separation is easily met for towers across the road from one another, this separation is needed to ensure adequate separation for towers that are on the same side of Princess Street.

We note that this requirement, while a best practice in terms of urban design, can adversely and unfairly prohibit other properties from meeting their full development potential if not implemented appropriately. Further clarification is needed to understand how this requirement will influence future building potential of the properties permitted to be developed with 14-storey building heights. We recommend that the policy and regulatory approach include parameters to ensure that at least a portion of the required 25-metre separation be incorporated into each development application. For example, each proposal may be required to maintain a minimum 12.5-metre property line setback for the tower where the property line does not abut a street. This example is not proposed as a solution, but rather to illustrate a simplified approach to address our concern. Our expectation is that a more flexible and nuanced approach will be incorporated into the Official Plan amendment, which will be carried forward into the zoning by-law amendment as well.

Finally, we note that section 4.2 of the Addendum discusses plans to identify additional heritage resources in the surrounding neighbourhoods with the intent of affording additional properties protection under the Ontario Heritage Act in early 2021. We ask that this process be made transparent and that staff identify the properties in question to allow property owners the appropriate opportunity to engage and consult with City staff in a proactive manner.

### Summary

We acknowledge that the proposed Addendum and Official Plan amendment have recognized the subject site as an appropriate location for increased height and we are encouraged by the proposed approach to re-designate the subject property to support additional building height up to 60 metres in the form of a six-storey podium with a 14-story residential tower. We reiterate our concern that the current zoning would not allow this and that it would be conducive to the proposed “green light” approach to include the property in the proposed zoning by-law amendment to implement the proposed Official Plan amendment. We also request additional clarification related to the intended 25-metre separation between residential towers and how this will be implemented both in policy and using regulatory tools as well as identifying properties which are being identified as possible heritage resources.

We would be pleased to meet with City staff and the consulting team to further discuss our comments. Should you have any questions or comments, please do not hesitate to contact the undersigned at [REDACTED]. We also ask to be notified of status updates related to these applications, as well as of any decision made by Council.

Respectfully submitted,



Youko Leclerc-Desjardins, RPP MCIP  
Senior Planner  
Fotenn Planning + Design



# WILLIAMSVILLE MAIN STREET STUDY ADDENDUM

## 490 + 500 PRINCESS STREET

1

August 13, 2020

**Ms. Andrea Gummo**

Acting Manager, Policy Planning  
City of Kingston  
1211 John Counter Blvd  
Kingston, ON K7K 6C7

Via Email: [agummo@cityofkingston.ca](mailto:agummo@cityofkingston.ca)

**RE: Williamsville Main Street Study Addendum  
490 + 500 Princess Street**

Dear Ms. Gummo,

Fotenn Planning + Design has been retained by 490 Princess Street Inc. and 502 Princess Street Inc. to provide this comment letter on their behalf regarding the draft Addendum to the Williamsville Main Street Study and related draft Official Plan and zoning by-law amendments. The following commentary is specific to their property, located at 500 Princess Street, and the adjacent 490 Princess Street property in which they have an interest. The purpose of this letter is to provide formal comment related to the proposed policy and regulatory changes affecting the subject site as set out in the Draft Addendum to the Williamsville Main Street Study and its appendices. Due to recent investments in the subject property, the economic viability of redeveloping the site is highly dependent on the potential unit yield and, therefore, building height. Should the redevelopment potential be limited as it is under the proposed policy framework, the subject properties would not be economically viable for redevelopment within the life of the plan.



Figure 1: Subject Site (490 + 500 Princess Street) (Source: K-Maps)



Fotenn, on behalf of our client, attended a meeting with City staff on January 7, 2020 to discuss the then-recently released Density by Design Issues and Options Report. At the time, City staff had combined the land use study required by the Interim Control By-law (2019-073) with the ongoing Density by Design exercise regarding mid-rise and tall buildings in the City of Kingston.

The purpose of our consultation was to make Planning staff aware of the development potential of the subject property, highlighting its appropriateness as a location for additional height and density given its location, dimensions and size, as well as the property owner's interest in maintaining its development potential through the policy review undertaken by the City.

We have reviewed the draft Addendum and draft Official Plan and zoning by-law amendments. The draft Addendum to the WMSS and the draft Official Plan and zoning by-law amendments would significantly constrain the development potential of this site and effectively prevent the site from being redeveloped since a six-storey mixed use building simply does not provide sufficient economic incentive to redevelop sites such as these properties which are economically viable in their current form.

### Increased Height

The development potential of the subject properties is directly affected by their location and potential for consolidation with adjacent lands. As such, there is greater development potential under the current policy framework than under the draft addendum and amendments proposed.

For a site which is currently economically viable to be redeveloped requires sufficient economic incentive to justify that redevelopment. It is not realistic to expect that the Williamsville Main Street will be fully redeveloped as a six-storey corridor because that increase in density is simply insufficient to warrant redeveloping the entirety of the corridor, as discussed in the economic analysis by Watson & Associates.

The subject site is located within the Gateway Character Area, which the Williamsville Main Street Study identified as an area for redevelopment and an appropriate context to accommodate buildings up to ten storeys. The draft Addendum states, "*Staff are recommending that additional taller buildings be limited to the City Designation and Gateway character areas.*" The recommendation then goes on to limit the taller building sites in the Gateway to only those properties in proximity to the intersection of Princess Street and Division Street.

The subject sites are across from the approved ten-storey buildings that form part of the University Suites project. Section 9 of the draft Addendum states the study is intended to "*[...] spur development and revitalization in an underutilized area of the City*". The site will remain as one-storey, single-use commercial uses for the life of the Official Plan, in complete contrast with the above-noted goal of the Williamsville Main Street Study.

Our request is that the updated policy documents continue to describe parameters for the development of taller buildings in Williamsville. The current policy framework establishes very few criteria for taller building sites (e.g. 36-metre lot depth). The draft policies provides helpful direction such as a minimum tower separation distance and maximum floor plate size, however it effectively locks down the maximum height in the corridor in such a way as to effectively ensure that the goals of the study will never be fully realized. We recommend that the study provide greater direction with respect to taller building sites (e.g. a minimum consolidated development area, location at an intersection, etc.) and continue to apply the compatibility criteria from Section 2.7 of the Official Plan when reviewing applications for redevelopment.

### Summary

The following summarizes our concern and the matter to which we request a response:

1. Consider the subject site(s) as a taller building site; and

- 
2. Establish criteria for taller building sites throughout the corridor to provide greater clarity, with the guidance deriving from the economic analysis provided by Watson and Associates.

We would be pleased to meet with City staff and the consulting team to further discuss our comments. Should you have any questions or comments, please do not hesitate to contact the undersigned at [REDACTED]. We also ask to be notified of status updates related to these applications, as well as of any decision made by Council.

Respectfully submitted,



Youko Leclerc-Desjardins, RPP MCIP  
Senior Planner  
Fotenn Planning + Design

# WILLIAMSVILLE MAIN STREET STUDY ADDENDUM

## 544-556 PRINCESS ST & 336 ALFRED ST

1

August 13, 2020

**Ms. Andrea Gummo**

Acting Manager, Policy Planning  
City of Kingston  
1211 John Counter Blvd  
Kingston, ON K7K 6C7

Via Email: [agummo@cityofkingston.ca](mailto:agummo@cityofkingston.ca)

**RE: Williamsville Main Street Study Addendum  
Stakeholder Comment – 544-556 Princess Street & 336 Alfred Street**

Dear Ms. Gummo,

Fotenn Planning + Design has been retained by Axion Development to provide this comment letter on their behalf regarding the draft Addendum to the Williamsville Main Street Study and related draft Official Plan and zoning by-law amendments. The following commentary is specific to the subject site, located at 544-556 Princess Street and 336 Alfred Street. We have reviewed the draft Addendum and draft Official Plan and zoning by-law amendments and are disappointed in the direction taken by staff in failing to recognize the subject site as an appropriate location for a taller building as well as effectively prohibiting any further tall buildings west of the Gateway.



Figure 1: Subject Site (544-556 Princess Street & 336 Alfred Street) (Source: K-Maps)

Fotenn, on behalf of our client, attended a meeting with City staff in early 2020 to discuss the then-recently released Density by Design Issues and Options Report. At the time, City staff had combined the land use study

required by the Interim Control By-law (2019-073) with the ongoing Density by Design exercise regarding mid-rise and tall buildings in the City of Kingston. The purpose of our consultation was to make Planning staff aware of the development potential of the subject property, highlighting its appropriateness as a location for additional height and density given its size, lot depth, dimensions, and location, as well as the property owner's interest in maintaining its development potential through the policy review undertaken by the City.

The draft Addendum states: *"There are a number of benefits to taller buildings from a public interest perspective when they are well designed. Taller buildings, when facilitating higher densities, make more efficient use of land, support active transport and public transit ridership, are less resource-intensive to heat and service, and provide a housing option that would not be available to the market under height restrictions. Because taller buildings are required to include elevators and are built to current accessibility standards, they also tend to be much more accessible for those with mobility challenges than low-rise buildings."* Despite this awareness of the many benefits to taller buildings, not to mention how these benefits align with City Council's strategic goals for addressing climate change, the draft Addendum only recommends two locations which will have permission for taller buildings and limits the balance of the corridor to a maximum height of six storeys.

One of the four *"definitions for success"* cited in the draft Addendum is providing *"[a]n approach that allows many/most individual projects to be viable under reasonable assumptions, with enough projects "green lit" in the short to medium term to address strategic smart growth goals in this key urban corridor."* The Addendum notes that the financial feasibility study by Watson and Associates concluded that the six-storey height is not financially viable in this area. Knowing that six-storeys is not financially viable, imposing a maximum height of six storeys throughout the corridor would have the exact opposite of the intended effect as it would only allow development options that are not financially viable.

The draft Addendum notes that the *"The Community Destination character area was noted as having the largest redevelopment potential based on the 2012 lot fabric and built form"* and building heights were to range from six to ten storeys. The draft Addendum and Official Plan and zoning by-law amendments would remove this redevelopment potential from the Community Destination character area entirely. The original Williamsville study effectively asserted that sites with a lot depth of 36 metres or greater from Princess Street *could be* appropriate for additional height and density, subject to demonstrating compatibility. The draft Addendum and Official Plan amendment will limit the maximum height to six storeys while also removing the requirement to demonstrate land use compatibility. This proposed change has the effect of reducing the development potential for sites within the Community Destination character area that are otherwise, under the current policy framework, suitable and appropriate for consideration of taller buildings.

### Increased Height on the Subject Site

We would like to express our concern regarding the approach taken in the draft Addendum and Official Plan and zoning by-law amendments to set a maximum height of six storeys throughout the majority of the corridor.

We disagree with the approach of prohibiting new, tall building sites other than at the intersection of Division Street and Princess Street. The subject site represents a site that would be appropriate and suitable for redevelopment as a taller building beyond the proposed six storey building height. The approach presented in the draft documents fails to respond to fundamental and real aspects of the technical studies prepared, the existing built form, and the goals of the study.

The subject site has frontage on Princess Street and Alfred Street, a lot depth which ranges from 37 metres to 41 metres from Princess Street, and an area of approximately 0.31 hectares, sufficient to accommodate a building taller than six-storeys with mitigation measures to address compatibility considerations with neighbouring properties to the south, west and east. The subject site is well-located in proximity to transit, community facilities and open spaces. The subject site is not located in proximity to or adjacent to properties containing heritage potential. As well, two development applications are being processed by the City which could result in 10-storey

buildings being located at the northwest and northeast corners of Princess Street and Alfred Street. A tall building on the subject site could appropriately complement the Williamsville corridor through effective urban design and compatibility reviews undertaken as part of the development application process.

**We request that the subject site, 544-556 Princess Street and 336 Alfred Street, be recognized as an appropriate location for increased height and density and/or that the study be revised to provide criteria to allow for taller building heights in the Williamsville corridor.**

### Summary

On our client's behalf, we request that:

1. The subject lands be recognized as an appropriate location for increased height and density or that criteria for the same be provided through this update to the Williamsville Main Street Study; and/or
2. That criteria for the development of tall buildings be maintained and strengthened through the updated Williamsville Main Street Study, rather than being abandoned in favour of a blanket six-storey approach that leaves little room for responding to site-specific land use compatibility matters.

We would be pleased to meet with City staff and the consulting team to further discuss our comments. Should you have any questions or comments, please do not hesitate to contact the undersigned at [REDACTED]. We also ask to be notified of status updates related to these applications, as well as of any decision made by Council.

Respectfully submitted,



Youko Leclerc-Desjardins, RPP MCIP  
Senior Planner  
Fotenn Planning + Design

# WILLIAMSVILLE MAIN STREET STUDY ADDENDUM SPEAKINGSTON

1

August 13, 2020

**Ms. Andrea Gummo**

Acting Manager, Policy Planning  
City of Kingston  
1211 John Counter Blvd  
Kingston, ON K7K 6C7

Via Email: [agummo@cityofkingston.ca](mailto:agummo@cityofkingston.ca)

**RE: Williamsville Main Street Study Addendum  
SPEAKingston**

Dear Ms. Gummo,

Fotenn Planning + Design has been retained by SPEAKingston to provide this comment letter on their behalf regarding the draft Addendum to the Williamsville Main Street Study and related draft Official Plan and zoning by-law amendments. The purpose of this letter is to provide formal comment related to the proposed policy and regulatory changes affecting the Williamsville corridor as set out in the Draft Addendum and its appendices.

SPEAKingston was founded almost two years ago and currently has over 400 members and over 2000 social media followers from across our community. The organization was founded by a group of public sector workers, local business owners, and executives seeking to add their voice to the ongoing debate surrounding development, jobs, taxes and infrastructure investment in the City. SPEAKingston stands for Social. Political. Economic. Action. Kingston. and views smart growth as a strategic direction for our City which has the following tenets:

1. Strengthen physical, technological and cultural infrastructure;
2. Grow the economic base with expanding employment, housing options and competitive taxes;
3. Foster attractive, vibrant, walkable and safe urban core and neighbourhoods; and,
4. Protect historical assets and natural environment in responsible ways.

Fotenn previously reviewed the March 2020 letter submitted by SPEAKingston which provided commentary on the Density by Design: Kingston's Mid-Rise and Tall Building Policy – Issues and Options Report and considered the workshop follow-up questions presented by Sonya Bolton via email on February 21, 2020. At the time, City staff had combined the land use study required by the Interim Control By-law (2019-073) with the ongoing Density by Design exercise regarding mid-rise and tall buildings in the City of Kingston.

Based on the review conducted of the draft Addendum and Official Plan and zoning by-law amendments, SPEAKingston is disappointed that the commentary provided in the previous March 2020 letter was largely ignored and is of the opinion that the approach presented in the draft policy and regulatory framework is likely to have the opposite of the intended result with the exception of one small area of Williamsville.

## Timing and Public Process

We begin with concerns regarding the general process and public consultation of the Williamsville Main Street Study update. Many stakeholders, including SPEAKingston, provided comments through the Density by Design consultation process that appear to have largely been ignored and not considered in this draft Addendum and Official Plan and zoning by-law amendments.

The draft policy documents were also released to the public on Friday, July 24<sup>th</sup> in the middle of the summer and the public has been provided less than three weeks for review and comment. Although consistent with minimum statutory requirements under the Planning Act, this approach is not conducive to effective public consultation.



This is not enough time to adequately review and digest the hundreds of pages of material in the draft Addendum, appendices and amendments and provide effective commentary and recommendations.

Based on the Council-approved Interim Control By-law Extension on August 11, 2020, staff are anticipating that a comprehensive report will be brought to Planning Committee in November 2020. This only provides three months to review public input and make necessary updates and ultimately will not allow the public or stakeholders sufficient opportunity to review the next round of changes before they are brought forward for a recommendation from Planning Committee and a decision from Council. This presents a significant flaw in the public consultation and public engagement aspect of this important process.

As well, Section 8 Public Consultation of the draft Addendum is silent on stakeholder feedback regarding tall building locations in Williamsville and appears to focus solely on the negative comments received from an admittedly limited segment of the public regarding tall buildings in the corridor.

### Six-Storey Corridor

SPEAKingston would like to express their concern regarding the approach taken in the draft Addendum and Official Plan and zoning by-law amendments to set a maximum height of six storeys throughout the majority of the corridor and to “greenlight” this homogeneous built form in advance of establishing suitable policies and urban design guidelines.

Under the current Williamsville Main Street policy framework, the main parameter for considering increased height or density on a site is a lot depth of 36 metres or greater from Princess Street, as well as qualitative measures to ensure that possible adverse effects on other land uses are mitigated and that a minimum of five hours of sunlight is maintained in the public realm. The original study effectively asserted that sites with a lot depth of 36 metres or greater from Princess Street *could be* appropriate for additional height and density, *subject to demonstrating compatibility* and achieving the urban design goals of the study. The draft Addendum and Official Plan amendment will remove this development potential entirely, limiting the maximum height to six storeys while also removing the requirement to demonstrate land use compatibility. This proposed change will have the effect of reducing the development potential for sites that are, under the current policy framework, suitable and appropriate for consideration of taller buildings.

The original Williamsville Main Street Study has resulted in successes and failures, which are defined differently by different groups. It is our opinion that the approved taller buildings are generally the greatest successes of the original study, and one significant reason for this is that the buildings underwent significant consultation with City staff, Planning Committee, and the public to maximize land use compatibility.

Section 9.1 of the draft Addendum cites numerous benefits related to tall buildings. These benefits include “[...] *facilitating higher densities, make more efficient use of land, support active transport and public transit that would not be available to the market under height restrictions. Because taller buildings are required to include elevators and are built to current accessibility standards, they also tend to be much more accessible for those with mobility challenges than low-rise buildings.*” Given the recommendations of the Addendum, it is our understanding that this benefit is only recommended for the corner of Princess Street and Division Street, whereas the rest of the corridor will be limited to a less efficient building height.

### Financial Viability

The Addendum makes it clear that it is not realistic to expect the Williamsville Main Street to be fully redeveloped as a six-storey corridor. The financial feasibility study prepared by Watson and Associates concluded that the six-storey height is not financially viable in this area due to land economics. The financial feasibility study states that “*A project is considered financially feasible if the project generates an I.R.R. of between 10-15% [...] The I.R.R. ranges from 6.5% to 8.5%, with the feasibility in all scenarios being below the minimum 10% I.R.R. threshold*”. Watson’s conclusion is that of the six-storey development scenarios assessed in the study, none are economically

viable in the Williamsville Main Street Area. Ordinarily, would result in a complete re-examination of the intended policy framework to achieve financial viability. Developers faced with a similar conclusion would have to make one of the following decisions: do nothing and allow a property to continue to function as it is if it economically viable to do so, abandon a project, or undertake a potentially significant and fundamental redesign. Since the implementation of the original Study, it has been demonstrated that a mix of taller and shorter buildings, as proposed in the original study and has been developed in the corridor, is financially viable.

One of the four “*definitions for success*” cited in the draft Addendum is providing “*An approach that allows many/most individual projects to be viable under reasonable assumptions, with enough projects “green lit” in the short to medium term to address strategic smart growth goals in this key urban corridor.*” This, however, is not reflected in the recommendations of the draft Addendum. The financial feasibility study, as noted above, concluded that the six-storey height is not financially viable in this area. Permitting a non-viable built form is not an effective “green light” strategy.

If the proposed height and massing restrictions are introduced, the financial success of development within the Williamsville Main Street area will be impacted and will result in fewer development projects being completed within the corridor.

### Reallocating Height and Density

Further consideration needs to be given to the location of tall buildings, in addition to the northwest and southwest corners of Princess Street and Division Street. The draft Addendum fails to consider buildings that have been constructed or approved within Williamsville (both taller and shorter than six storeys) and not likely to undergo redevelopment within the life of the Official Plan. Properties that have not utilized their full height or density permissions and will not likely utilize the proposed six-storey permissions should not be disregarded, nor should it be assumed that a developer would find it feasible to tear down an existing, purpose-built four-storey building to construct a six-storey building.

Consideration should be given to allocating the unused height and density to other sites to allow greater building height. This approach is both logical and consistent with the servicing review and allocation discussed by Utilities Kingston. If this does not occur, Williamsville will not experience its full development potential, will fall short in providing the necessary housing units within the City’s downtown area, and will fail to achieve its goal of contributing to a healthy vacancy rate within the City. Failure to account for unachievable units will also have the consequence of skewing housing and population projections and statistics through the inclusion of dwelling units that will never be built.

### Heritage Considerations

Similarly, there is a general lack of consideration given to the impact of heritage designated sites in the draft Addendum and related draft Official Plan and zoning by-law amendments despite assertions in the Addendum for achieving heritage conservation goals. Several properties located within the Williamsville Main Street Area are designated built heritage resources under the *Ontario Heritage Act* and will be conserved, which will have the effect of limiting the potential height of these sites. No consideration has been given to designated built heritage resources on streets connecting to Princess Street or properties located adjacent or in proximity to the Williamsville Main Street Area either. These would impact and reduce the development potential of properties located within Williamsville that, under the draft policy framework, would appear to permit increased height and density.

### Additional Changes

SPEAKingston supports the removal of the angular plane provision and the exclusion of density as a tool for restricting future proposed developments. As well, SPEAKingston supports the reduction of the required residential parking ratio to 0.5 spaces per residential dwelling unit, however, we note with concern that no reduction is proposed for commercial uses. Based on the City’s promotion of active transportation and transit as a means of responding to Council’s Climate Change Emergency declaration, it would be appropriate to also

propose a reduced commercial use parking ratio as has been done as a matter of course for other projects approved within the corridor.

It is also concerning that the City is seeking to remove the compatibility criteria for developments six storeys or below. Section 9.6 states “[...] for *Williamsville*, staff are recommending exempting the corridor from the policies of 2.7. This is because staff have already determined compatibility of the proposed permissions for the corridor”. The requirement of considering Section 2.7 is to ensure proposed development is compatible with the specific surrounding area. It is a risky path forward to assume that all six-storey development will be compatible with adjacent uses and built forms and further removing this requirement from development applications. We appreciate that the purpose of this goal is to assist with streamlining development approvals and reviews, however we suggest that a more effective method would be to implement specific criteria for the corridor in recognition of its urban environment (e.g. overlook in an urban area is a given, as is the need to ensure that commercial loading take place outside of the corridor’s main street).

### Summary

The draft addendum states that “*The Williamsville Main Street Study was intended to spur development and revitalization in an underutilized area of the City*”. The policies and changes being proposed will not support this intensification.

It is our opinion that the Addendum to the Williamsville Main Street Study and its implementing policy and regulatory tools should continue to provide criteria related to the location of taller building sites in Williamsville, along with detailed policy tools to ensure that development applications will be compatible, rather than the broad-strokes approach presented in the draft Addendum which has been demonstrated by the financial feasibility study prepared by Watson and Associates to be non-viable, economically.

We require the City to provide consideration and responses for:

1. Indicate if the public will have an opportunity to review the draft Addendum and Official Plan and zoning by-law amendment updates prior to bringing a comprehensive report to Planning Committee in November 2020;
2. Provide justification for a six-storey building height maximum when the financial feasibility study prepared by Watson and Associates concludes this is not economically viable;
3. Provide consideration for future unused height and density;
4. Provide consideration for heritage impacts on the development of the Williamsville Main Street Area; and
5. Provide locations for additional tall buildings, beyond the intersection of Princess Street and Division Street, within the Williamsville Main Street Area.

We would be pleased to meet with City staff and the consulting team to further discuss our comments. Should you have any questions or comments, please do not hesitate to contact the undersigned at [REDACTED]. We also ask to be notified of status updates related to these applications, as well as of any decision made by Council.

Respectfully submitted,



Mike Keene, RPP MCIP  
Principal, Planning + Development  
Fotenn Planning + Design

City of Kingston's  
*Williamsville Main Street  
Study Update*  
Commercial Ground Floor Uses

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**IBI GROUP**  
August 13, 2020

## IBI Group

Global team of dedicated and experienced architects, engineers, planners, designers, and technology professionals who share a common desire – to help our clients create liveable, sustainable and advanced communities.

We work across six continents, from our 60 offices worldwide. IBI Group has eight offices in Ontario, including in Kingston.

**Client:** owner of 630 Princess (mixed-use development with ground floor commercial)

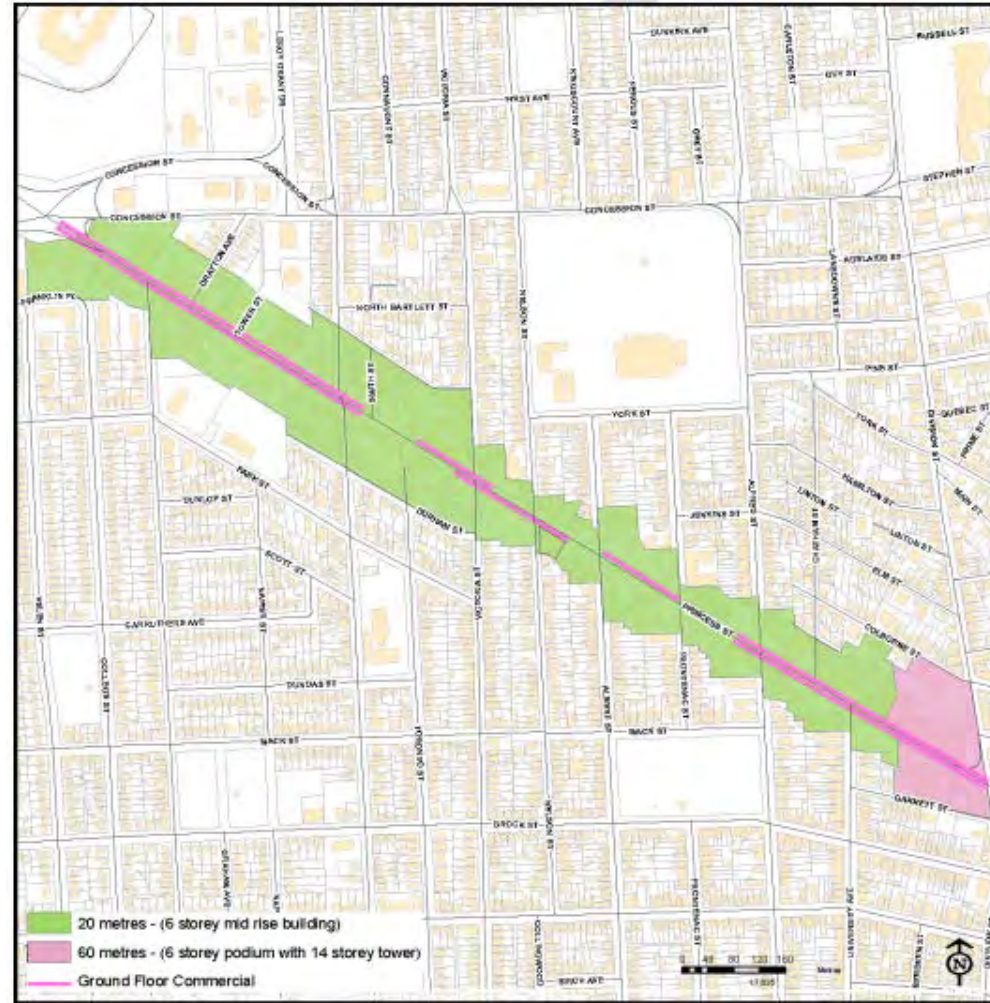






# Commercial within Williamsville Main Street

- **Challenge:** high commercial vacancy rates
- **Reality:** Decline of retail – traditional “brick and mortar” physical store model is on life support and has been for several years
  - Coronavirus pandemic has forced irreversible shifts
- **Goal:** how to provide “active streetscapes” given challenges to traditional retail?



Ground Floor Commercial Requirements



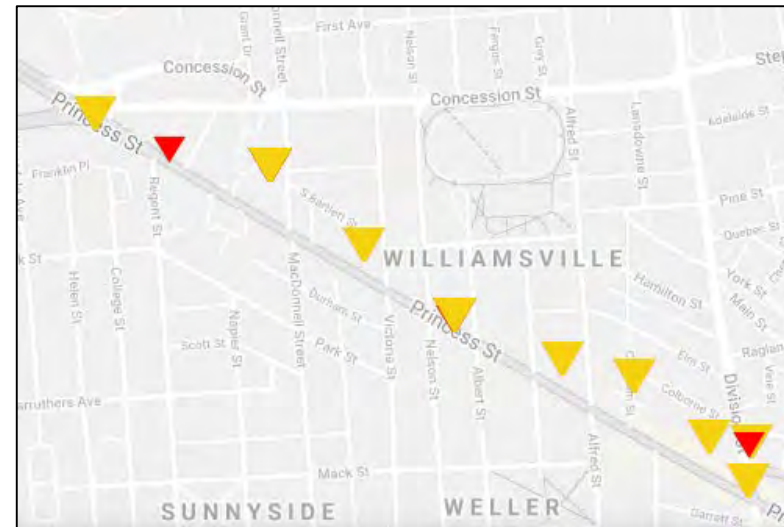


## Challenge: high commercial vacancy rates

- 23 commercial units for lease / sale on Princess Street in Williamsville
- +/- 49,000 sq.ft. of available space

## Context:

- 2016 Commercial Land Study identified 6.8% vacancy based on 26,600 sq.ft. (vs. 49,000 sq.ft. currently)
  - New developments add more space:
    - 575 Princess: 9,795 sq.ft.
    - 652 Princess: 7,319 sq.ft.
    - 495 Princess: 4,973 sq.ft.
    - 333 University: 11,140 sq.ft.
- TOTAL: 33,227 sq.ft.**



**Source:**

Rogers & Trainor Commercial (Rtcr.com)  
 Realtor.ca  
 Cushmanwakefieldkingston.com



## Reality: Decline of traditional “brick and mortar” retail

- Shift of retail to on-line accelerated by Coronavirus pandemic
- Permanent shifts to traditional retail and office needs



***Business as usual is not an option.***

***For neighborhoods to be vibrant, vacant spaces must be activated & used.***



**Goal:** how to provide “active streetscapes” given challenges to traditional retail?

- Ground floor commercial requirements must be flexible enough to keep up with existing and emerging trends
- Ground floor residential in the appropriate locations is better than long-term vacancies
- Include design guidelines and policies to encourage at-grade residential to contribute to the streetscape





August 13, 2020

Andrea Gummo, Manager, Policy Planning

The Corporation of the City of Kingston Planning Services  
216 Ontario Street

Kingston, ON K7L 2Z3

### **KCAT reaction to the Williamsville Main Street Study Update**

Dear Ms Gummo,

We are deeply disappointed with the report released on July 24, 2020. It is 350 pages of poorly edited and misleading information.

There has simply not been enough time to digest this information and provide reasonable feedback. KCAT has been heavily involved in planning a Quiet Streets Pilot project. Through this work we have confirmed what we already knew about the importance of having North-South connections for AT that cross Princess St and Concession St., especially at Frontenac (joining Victoria Park with Memorial Centre) and Macdonnell St, and where Alfred connects the important Mack St East-West AT traffic travelling to join the Princess Street bike lanes to the downtown core. Alas, the dominance of car traffic has made interventions (even *pilot* interventions) unpalatable for City staff to consider.

The so-called Transportation Analysis presented by Dillon was all about measuring motor vehicle road capacity. Even admitting that, in Williamsville, there is ALREADY ONLY one third of all trips using motor vehicles, they proceeded to model vehicle traffic. They only mentioned the need for 'improvements to transit and the pedestrian experience' without making any pragmatic suggestions.

Dillon's magical and mystical modelling that projects traffic flows in 2036. Really? And what will be the weather forecast for July 30<sup>th</sup>, 2036? Their modelling is projecting only Business as Usual (BAU) for 15 years without considering the massive changes that HAVE to happen with GHG-producing private vehicles. Could Princess St be made car-free so only Transit and AT is allowed, much like the Toronto King St project that only allowed cars to travel one block on King before turning right?

The lack of imagination in this report is stunning. There is a serious lack of recognition that the increased density, and the nature of the growing student population in this part of Princess, warrants a Complete Streets approach. Anything less will result in avoidable future costs when it becomes obvious that this is the way to go.

KCAT would ask that decisions on this report be delayed until we, and others, can spend time digesting the material and make reasoned reactions.

Respectfully submitted on behalf of KCAT,

Roger Healey, Chair



## **Williamsville Main Street Plan Amendments – public input**

Williamsville is being transformed in a good way. A long neglected commercial area of the city, with rundown buildings and empty weed-filled empty lots is finally seeing major private investment. In recent years, three 5 and 6 storey mixed use residential-commercial buildings have been completed. Now five major buildings are rising up, two of which are at the stage where we can get the idea of what the finished products will look like. And it's clear, architecturally a giant investment step forward has been taken. These two ten-storey projects have lots of character. They are not boxes, but have lots of interesting shapes and angles, varying façade finishes and colour, interesting and varied window uses and sizes, terraces & balconies, interesting upper level step-backs, enticing ground floor commercial spaces. It also shows a clear comparison architecturally, of what can be done at five storeys compared to ten and in my opinion the taller buildings make great statements, Kingston matters, Kingston is coming of age, Kingston is worth the investment.

That's not to say that five and six storey buildings don't have their place. They offer new badly needed housing options and their investment and the jobs they create are nothing to sneeze at. The five story residential building nearing completion on Frontenac Street is a great example of a very effective transition project between commercial Princess St. and past their best-before-date residential side streets. More of these type projects are needed, Nelson St. would be a prime candidate for example.

The city is about to update to the Williamsville Main Street Plan that will potentially stop in its tracks all the good transformation of this part of the city. Why, because a few activists and nimby's make more noise than the rest of us. They want to limit height and therefore take away the best architectural possibilities. They want to limit side street development and therefore limit new housing possibilities in a market that desperately needs more supply. Is the talk of more housing by council, just that, talk?

Ed Smith,

Kingston



# WILLIAMSVILLE MAIN STREET STUDY ADDENDUM

## 170 COLBORNE ST

1

September 29, 2020

**Ms. Andrea Gummo**

Acting Manager, Policy Planning  
City of Kingston  
1211 John Counter Blvd  
Kingston, ON K7K 6C7

Via Email: [agummo@cityofkingston.ca](mailto:agummo@cityofkingston.ca)

**RE: Williamsville Main Street Study Addendum  
170 Colborne Street**

Dear Ms. Gummo,

Fotenn Planning + Design has been retained by Cogeco Connexion to provide this supplemental comment letter on their behalf regarding the draft Addendum to the Williamsville Main Street Study and related draft Official Plan and zoning by-law amendments. The following commentary is specific to the interests of Cogeco Connexion and the policies related to their property located at 170 Colborne Street.

The purpose of this letter is to provide feedback on proposed policy and regulatory changes affecting the subject site following informal discussions with Planning staff in September 2020, as follows:

1. Continue to recognize this as a site suitable for a 20-storey building as presented at the statutory public meeting on August 13;
2. Include this property in the zoning by-law amendment and apply the parent C4 zone to this site to support the intent of the Williamsville Main Street Study and maintain conformity with the proposed official plan amendment; and
3. Provide additional clarification with respect to intended building heights; the permitted location(s) for tall buildings; and the required 25-metre separation between residential towers.

### Tall Building Site

We acknowledge that the draft Official Plan policies propose to recognize this site as a location that could support additional building height up to 60 metres in the form of a 20-storey building that could consist of a six-storey podium and a 14-story residential tower, provided that the footprint of the tower be limited to 790 square metres. We applaud the approach to include this site as a taller building site within Williamsville and agree that the site's location in proximity to the intersection of Division Street and Princess Street makes it a suitable candidate.

**We ask that this property continue to be recognized as a site suitable for a taller (20-storey) building.**

### Zoning

The proposed Official Plan amendment (OPA) will establish a framework to allow a 20-storey building to be constructed on the property, however the subject site was not included within the City-initiated zoning by-law amendment intended to implement the OPA. This is understood to be because the subject site is currently within a site-specific Commercial Uses (Central Business District and Upper Princess Street) Zone (C.188). The current zoning is a legacy of previous rezoning in the 1980s that restricted the non-residential uses on the site and limited the total floor area. A subsequent amendment introduced a "wholesale silk-screening and sportswear business" as a permitted use. The property is presently used by Cogeco Connexion and does not include the above noted silk-screening use.

The current site-specific zone does not allow the built form envisioned by the update to the Williamsville Main Street Study or the proposed Official Plan amendment (OPA). The subject site is the largest single landholding within the area shown on Schedule B of the proposed OPA intended for taller buildings, and is the only property within that area that would not gain the as-of-right ability to develop as a 20-storey building due to its exclusion from the zoning by-law amendment.

Cogeco has requested that the subject site be re-zoned to the parent C4 zone as it is proposed to be amended through the current City-initiated application. The site-specific provisions and uses would be abandoned in favour of the permitted uses and performance standards of the C4 zone to permit the built form envisioned by the Williamsville Main Street Study as of right.

As noted in the Addendum to the Williamsville Main Street Study, the intent of the study is to allow “*many/most individual projects to be viable under reasonable assumptions, with enough projects “green lit” in the short to medium term to address strategic smart growth goals in this key urban corridor*”. The subject property is the largest single landholding within the area intended to be designated for a 20-storey building and therefore possesses significant potential to be redeveloped in the short to medium term. Including the site within the City-initiated zoning by-law amendment would contribute to fulfilling the stated intent of the study.

**We request that this property be included in the zoning by-law amendment and that the parent C4-H(T1) zone be applied to the lands.**

### Tall Building Performance Standards

We also provide the following comments on the proposed performance for taller buildings as expressed in the draft OPA and zoning by-law amendment:

- / The proposed 60-metre building height maximum would not quite be sufficient to allow a 20-storey height with a 4.5 metre ground floor height and rooftop mechanical. We recommend that the maximum height in metres be increased appropriately and that greater flexibility be provided for any features that may need to exceed the maximum building height;
- / We ask that the permitted location of tall buildings be clarified in the zoning by-law amendment. While a general area is noted on draft Schedule PS-1, Princess Street Corridor Specific Policy Area Williamsville Main Street for the location of 60 metre building heights, greater clarity is recommended;
- / We ask that consideration for the 25-metre separation between residential towers which is included in the Official Plan amendment but not the zoning by-law amendment be further defined. It is unclear how this requirement will be applied to ensure that development on one property does not unfairly constrain development on an adjacent property.

We would be pleased to meet with City staff and the consulting team to further discuss our comments. Should you have any questions or comments, please do not hesitate to contact the undersigned at [REDACTED]. We also ask to be notified of status updates related to these applications, as well as of any decision made by Council.

Respectfully submitted,



Youko Leclerc-Desjardins, MCIP RPP  
Senior Planner  
Fotenn Planning + Design

# APPENDIX B DRAFT ZONING BY-LAW AMENDMENT TEXT

Schedule showing proposed zone change:

### Schedule 'A'



# WILLIAMSVILLE MAIN STREET STUDY ADDENDUM 1

## 641-647 PRINCESS ST, 577 VICTORIA ST & 236 NELSON ST

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September 29, 2020

**Ms. Andrea Gummo**

Acting Manager, Policy Planning  
City of Kingston  
1211 John Counter Blvd  
Kingston, ON K7K 6C7

Via Email: [agummo@cityofkingston.ca](mailto:agummo@cityofkingston.ca)

**RE: Williamsville Main Street Study Addendum  
641-647 Princess Street, 577 Victoria Street & 236 Nelson Street**

---

Dear Ms. Gummo,

Fotenn Planning + Design has been retained by 530742 Ontario Ltd. (an Ontario corporation owned wholly by Mike Scrannage and Karen Charlton), and the Anglican Diocese of Ontario to provide this additional comment letter on their behalf regarding the draft Addendum to the Williamsville Main Street Study (WMSS) and related draft Official Plan and zoning by-law amendments. The following commentary is specific to the interests of their properties located at 641-647 Princess Street, 577 Victoria Street (for 530742 Ontario Ltd.) and 236 Nelson Street (for the Anglican Diocese). The purpose of this letter is to provide supplemental comment related to the proposed policy and regulatory changes affecting the subject lands as set out in the Draft Addendum to the WMSS and its appendices.

On our clients' behalf, we request that:

1. 236 Nelson Street (St. Luke's Church) be included within the Williamsville Main Street Area, including the implementing Official Plan and zoning by-law amendments;
2. The subject lands be recognized as an appropriate location for increased height and density;
3. Should the site not be recognized as a taller building site, that criteria for the establishment of taller building sites between the Williamsville Gateways be provided to ensure that the housing goals underlying the WMSS can continue to be met.

### 236 Nelson Street

The St. Luke's Church property, known municipally as 236 Nelson Street, abuts on several properties that are within the WMSS area. The property has an important and historical relationship with the WMSS area, as St. Luke's hosted community consultations for this very project. Including the subject site within the WMSS area and its associated official plan and zoning by-law amendments has the following advantages:

#### Green Streets

- / The property has approximately 50 metres of frontage on a designated Green Street, occupying a significant portion (approximately one-third) of the potentially "green-able" frontage on the west side of Nelson Street.
- / The Official Plan intends Green Streets to be "*tree-lined corridors that create important visual links and enhance pedestrian and cyclist connections between areas within and surrounding the Williamsville Main Street.*"
- / Incorporating the site within the WMSS and associated policy and regulatory tools will strengthen the implementation of the Green Streets policy along the entire frontage of this property, providing an enhanced "greening" along the west side of Nelson Street more than half of the distance between Princess Street and York Street.

### Residential Compatibility

- / The subject site is zoned for residential use but is not used for residential purposes and has not been for decades. Because of the zoning, this property would impose the same setbacks (8-metres) on the adjacent WMSS properties as any other residential use, severely limiting their ability to be redeveloped in accordance with the goals of the WMSS, meaning that the adjacent properties including 637 Princess Street, 641-647 Princess Street, and 577 Victoria Street which as a result may not be developable at the six-storey height envisioned by the updated WMSS.
- / Further, incorporating the St. Luke's property into the WMSS area would provide significantly improved opportunity to incorporate a suitable transition from a six-storey building height along Princess Street to the lower density residential uses along Nelson Street and Victoria Street north of the subject site.

**We strongly encourage that 236 Nelson Street be included within the Williamsville Main Street Study Area and the associated Official Plan and zoning by-law amendments.**

### **Height and Density on the Consolidated Parcels**

The subject properties collectively represent a site that would be appropriate and suitable for redevelopment with a taller building for the following reasons:

- / The east side of the Princess Street/Victoria Street intersection is framed by two-storey limestone buildings. Due to the redevelopment of a ten-storey form on the property on the south side of the street, the opportunity exists to establish a suitable and appropriate gateway for Williamsville by responding to the approved development with a similar approach which blends heritage conservation with contemporary design;
- / The shadow impacts from a six-storey as-of-right building on the consolidated parcels could be more substantial than a 10-storey building with a limited footprint that incorporates best practices in urban design and appropriate mitigation measures.

**We request that the subject lands, 641-647 Princess Street, 577 Victoria Street and 236 Nelson Street, be recognized as an appropriate location for increased height and density.**

### **Achieving Housing & Density Goals**

We are concerned that the proposed maximum height of six storeys may not achieve the residential goal of absorbing 5-7% of the City's growth to 2046 (approximately 3,000 units) in Williamsville. Not all of the properties in Williamsville will be redeveloped at the maximum potential for a number of reasons including the properties being too small or otherwise constrained by heritage or proximity to residential uses. The draft WMSS update along with the proposed height map for the Official Plan amendment also allocate a six-storey height to sites that have recently been redeveloped, or which are presently being redeveloped, at less than six storeys and which are unlikely to be redeveloped at the full six storeys allocated within the life of the plan. As such, if the maximum height of six storeys is based on achieving a planned unit count, the housing targets may not be achievable. As such, we recommend the following:

- / The WMSS and implementing Official Plan amendment should provide a framework for development of building heights in excess of the proposed six storey maximum to ensure that the housing goals for the Williamsville Main Street can still be achieved. For example, the policy framework could guide development alternatives for applicants that can demonstrate improved height or built form compatibility with the nearby residential area which achieve a similar number of residential units as an as-of-right building;
- / Consideration should be given to allowing unused height and density from certain sites to be utilized by other sites to allow greater building height. This approach is both logical and consistent with the servicing review and allocation discussed by Utilities Kingston. A comparable approach used in some municipalities is the sale of "air rights" for constrained properties, which has the added benefit of supporting heritage conservation;

- 
- / Should applicants undertake their own financial feasibility analyses and find that as of right development is not viable, the above options would support a framework that enables redevelopment to occur in a form which is consistent with the goals of the WMSS.

**We request that policy criteria be provided to enable the development of greater building heights for the purpose of achieving the housing goals for the WMSS.**

We would be pleased to meet with City staff and the consulting team to further discuss our comments. Should you have any questions or comments, please do not hesitate to contact the undersigned at [REDACTED]. We also ask to be notified of status updates related to these applications, as well as of any decision made by Council.

Respectfully submitted,



Youko Leclerc-Desjardins, MCIP RPP  
Senior Planner  
Fotenn Planning + Design



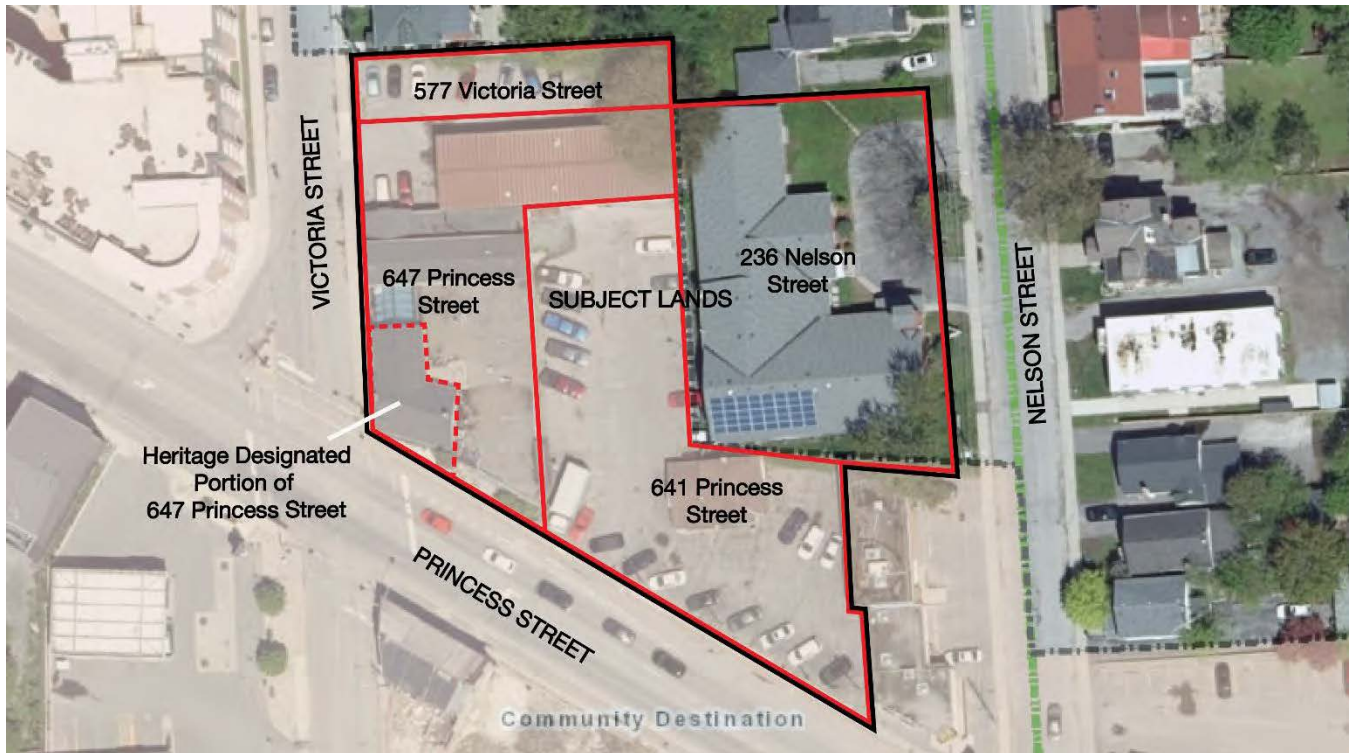


Figure 1: 641-647 Princess Street, 577 Victoria Street and 236 Nelson Street (Source: K-Maps)



**IBI GROUP**  
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September 29, 2020

Sonya Bolton  
Senior Planner  
City of Kingston  
1211 John Counter Blvd  
Kingston, Ontario  
K7K 6C7

**WILLIAMSVILLE MAIN STREET STUDY ADDENDUM OPA/ZBA  
429 & 445 PRINCESS ST. KINGSTON  
IBI FILE NO. 121711**

**Introduction**

IBI Group is the authorized agent for 1975919 Ontario Inc. (“Goldmanco Inc.”), the owner of the properties municipally addressed as 429 and 445 Princess Street (the “subject lands”). The subject lands are located on the north side of Princess Street, west of Division Street. 429 Princess Street is currently occupied with a paved parking lot, and 445 Princess Street is improved by a commercial building currently occupied by Shoppers Drug Mart. The parking lot is for the exclusive use of the Shoppers tenant.

IBI Group was retained to review the Interim Control By-law applying to the Williamsville Main Street Corridor, as enacted by the City in May 2019. Our review considers the ICBL as it applies to the subject lands and any changes that may be proposed to the Official Plan policies and implementing zoning. This letter is provided in response to the Draft Addendum to the Williamsville Main Street Study (July 24, 2020) as well as the accompanying Draft Official Plan Amendment and Zoning By-law Amendment.

**Draft Policy Review**

As indicated in an email to City staff, our initial review of the Williamsville Main Street Study Addendum (July 24, 2020) was positive, and the owners were satisfied with the proposed policies for the subject lands. Specifically, the proposed inclusion of both properties in the Williamsville Main Street Designation and the height and other performance provisions proposed for the subject lands. In order to further test the viability of the proposed policies, the owner provided a building concept plan which we reviewed against the proposed Official Plan and Zoning By-law policies. The building concept plan is included as an addendum to this letter. This review revealed policy areas that require further comment. On behalf of Goldmanco Inc., we provide the following comments on the proposed policies and implementing zoning for Williamsville Main Street.

***Residential Parking***

In the Draft Addendum to the WMSS (July 24, 2020) staff recommended a temporary reduction in the required residential parking ratio within Williamsville to 0.5 parking spaces per dwelling unit for areas where the height of buildings is limited to 6 storeys. However, this recommendation was not carried forward in the Draft Zoning By-law (Appendix E). It is understood that as part of the city-

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wide zoning by-law consolidation, a parking study is being completed that will recommend specific parking ratios for various areas in the city. Understanding that this work is still underway, staff included this recommendation to improve the financial viability of 6 storey development recognizing that Council has commonly approved reductions in parking to 0.5 spaces per dwelling unit in the area.

Financial viability aside, 0.5 parking spaces per unit has been approved in other areas of the WMSS Corridor and the CBD (e.g. 652 Princess St. and 495 Princess St.) based on site-specific studies and ultimately supported by principles of good land use planning. As such, encourage the City to consider 0.5 parking spaces per unit not only for 6 storey development but also for taller buildings (i.e. 7 storeys and above). As indicated in the Draft Addendum, the ratio of 0.5 parking spaces per dwelling unit as proven functional in many areas of the City, and especially in locations with access to express transit. The subject lands are located within walking distance (<100 metres) of express transit stops and as such a parking ratio of 0.5 spaces per unit would be functional and would support the City's goal of increasing active transportation and transit modal share. Further, if 0.5 spaces per unit is supportable and appropriate for a lower built form, it is not clear why a greater parking ratio is necessary for a taller built-form – aside from the economics of one construction and building type over another, it seems that the parking demands of either building type would be comparable.

We therefore request that staff's recommendation to include a temporary reduction to the residential parking ratio in Williamsville to 0.5 parking spaces per dwelling unit be included in the Zoning By-law Amendment and that the parking ratio of 0.5 parking spaces per dwelling unit apply to all areas of the WMSS Area, not just areas where the height of buildings is limited to 6 storeys. The inclusion of a reduced residential parking ratio would facilitate the efficient development of the subject lands and corridor as a whole, while supporting the goals and objectives of the Williamsville Main Street Study and Official Plan.

### ***Commercial Parking / Loading***

The Draft Addendum did not speak to proposed changes to commercial parking requirements. It is understood that, as part of the city-wide zoning by-law consolidation, a parking study is being completed that will recommend specific parking ratios for various areas in the city. Understanding that this work is still underway, we suggest that staff consider a similar parking reduction for commercial uses that was proposed for residential uses (i.e. a temporary reduction pending implementation of the new Comprehensive Zoning By-law). We request that staff consider including a temporary parking reduction for commercial parking within Williamsville to 1 parking space per 150 sq. m of gross leasable area for any permitted commercial use, and include a temporary loading space reduction within Williamsville to 1 Loading Space. This parking ratio has been approved on other sites in the area (e.g. 652 Princess St. and 495 Princess St.) and is consistent with modern development standards. It is understood that the amount of commercial parking that is to be provided on the subject lands is largely driven by the demands of the commercial tenants of the building. It is understood that a commercial parking ratio of 1 parking space per 150 sq. m (1,615 sq. ft.) of gross leasable area is more consistent with the anticipated demands of the tenant when compared to the current commercial parking requirement of 1 space per 28 sq. m (300 sq. ft.) of gross leasable area. We note that it may be appropriate to retain a separate standard for restaurant uses as they may generate a higher amount of vehicular traffic than other commercial or retail uses. This reduced ratio has proven to be acceptable in other areas along the Williamsville Corridor and in the CBD and supports the Study's goals related to active transportation and transit mode share.

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### ***Setback from Princess & Division***

The Draft Official Plan Amendment and Zoning By-law Amendment require a minimum setback of 3 m from Princess Street and Division Street. The Draft Addendum identifies that Princess Street is narrow for an Arterial Road (approximately 20 m) and that there is little space to accommodate anything beyond the basic infrastructure requirements of an urban street within the existing right of way. It is understood that the minimum setbacks are required in order to widen the pedestrian realm and to provide street trees, benches, and active commercial frontages.

The proposed building concept includes a landscape plaza at the corner of Princess and Division Street which exceeds 3 m in width and then tapers down to a minimum of 1.5 m setback from the street. The landscape plaza provides a wide pedestrian realm and space for programming on the street. Given there are specific design considerations for the corner lot we request that the City consider reducing the required setback from Princess and Division Street to less than 3 m for the subject property in order to accommodate the proposed building concept and landscaped plaza.

The width of Princess Street right of way adjacent to the subject lands is approximately 20 m wide. The width of Division Street right of way adjacent to the subject lands is approximately 18 m wide. We understand that a road widening would likely be required along Division Street. We recognize that the existing right of ways do not allow for a widened pedestrian realm, particularly in this area of Princess Street and Division Street, but our client anticipates that that setbacks of less than 3 m would be needed at this site in order to build out the site to 70% lot coverage while accommodating a loading space at the rear of the property. Therefore, we request that the City consider reducing the required setback from Princess or Division Street to less than 3 m in order to accommodate site specific design considerations for the corner lot. We note that the redevelopment of the subject lands could include allowances for an enhanced pedestrian realm in the form of a landscaped plaza at the intersection of Princess and Division that could accommodate a wider sidewalk and various street furniture elements.

If inclusion of an as-of-right permission for a reduced setback in this location absent a site-specific application is unsupportable, a second suggestion is to include allowances for articulation within the setback (e.g. minimum of 50% of building face at 3 m setback, maximum of 50% of building face at 2 m setback). In addition to this, allowances for overhanging/cantilevered upper floors and/or porticos would provide for a widened pedestrian realm while providing some allowances for development.

Alternatively, we request clarification if the City would consider site specific amendments to the setback requirements at the time of development. This may involve reducing the setback from the street at either Princess and/or Division Street in order to best locate a building built to the required 70% lot coverage as well as providing public realm amenities such as the proposed landscape plaza. It is anticipated that a site-specific design approach could achieve the goals of both the City and the land owner in this regard, but we would like to ensure that the new policies and implementing zoning would not preclude consideration of such an approach.

### ***Ground Floor Height***

There is an inconsistent requirement for Ground Floor Height between the Draft Official Plan Amendment and Draft Zoning By-law Amendment. Section 10E.1.19 of the Draft Official Plan Amendment states "***The floor-to-floor height of the ground level must be a minimum of 4.5 metres...***" whereas Section 23C.3(a)(v) of the Draft Zoning By-law Amendment states "***The ground floor storey of a building / structure shall have a minimum floor to ceiling height of 4.5 metres.***" The different definitions of ground floor height (i.e. floor-to-floor height versus floor to ceiling height) are anticipated to cause challenges related to the correct interpretation of the

September 29, 2020

requirements. We therefore request that staff revise the Draft OPA and ZBA to ensure that the requirement for Ground Floor Height is consistent (i.e. either floor-to-floor height or floor to ceiling height). Our experience with application of the existing policies is that the floor-to-floor height is the typical approach.

### Summary

On behalf of Goldmanco Inc., we request that the City consider these comments in the refinement of the Official Plan Amendment and Zoning By-law Amendment for the Williamsville Main Street Study Addendum. If you have any questions or wish to discuss this further, please do not hesitate to contact us.

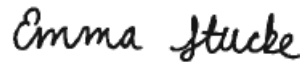
Sincerely,

**IBI GROUP**



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Mark Touw, MCIP RPP  
Associate Director

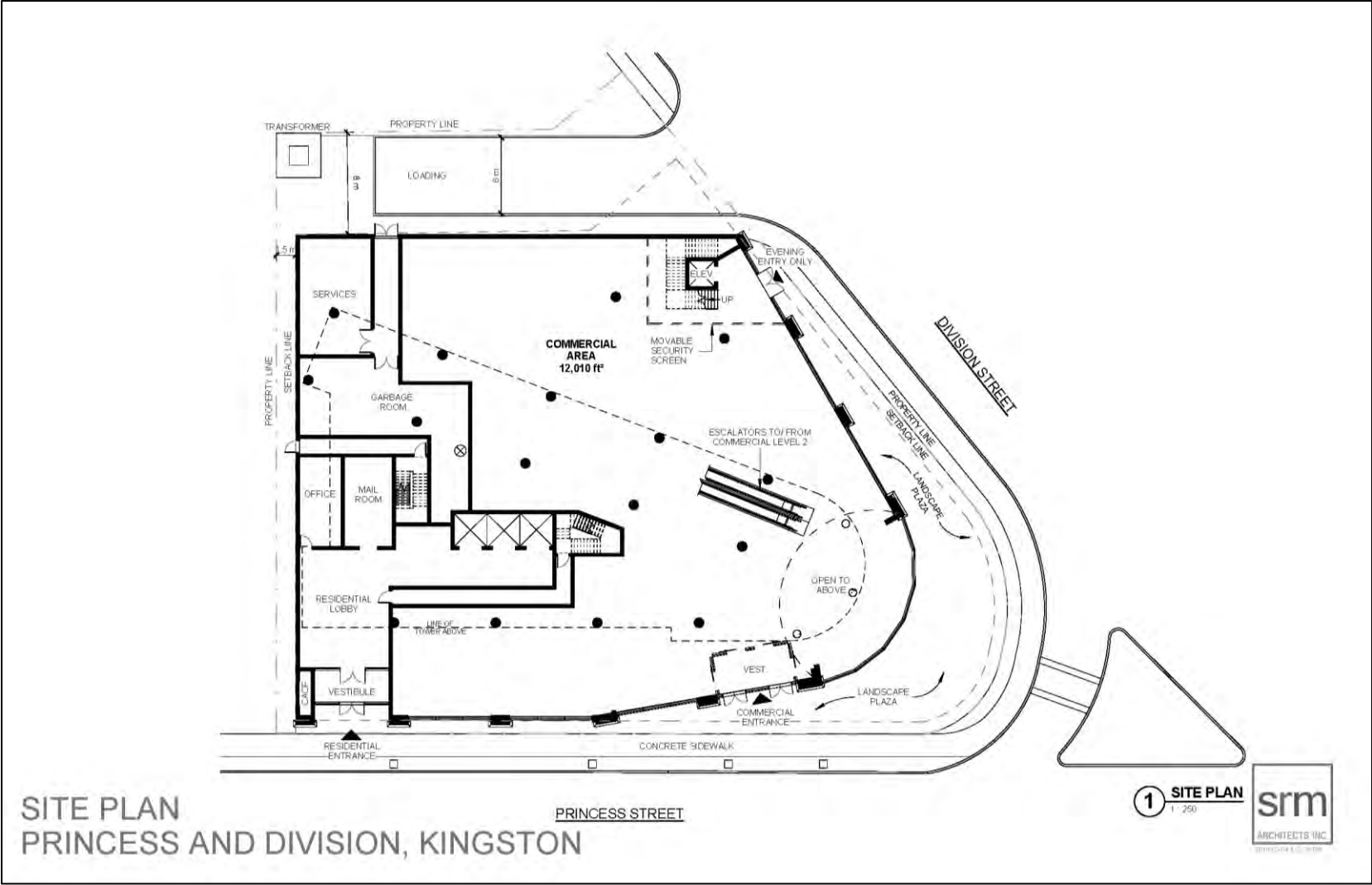


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Emma Stucke, BCD  
Planner

September 29, 2020

### Building Concept Plan





# WILLIAMSVILLE MAIN STREET STUDY ADDENDUM

## 490 + 500 PRINCESS STREET

1

September 30, 2020

**Ms. Andrea Gummo**

Acting Manager, Policy Planning  
City of Kingston  
1211 John Counter Blvd  
Kingston, ON K7K 6C7

Via Email: [agummo@cityofkingston.ca](mailto:agummo@cityofkingston.ca)

**RE: Williamsville Main Street Study Addendum  
490 + 500 Princess Street**

Dear Ms. Gummo,

Fotenn Planning + Design has been retained by 490 Princess Street Inc. and 502 Princess Street Inc. to provide this additional comment letter on their behalf regarding the draft Addendum to the Williamsville Main Street Study (WMSS) and related draft Official Plan and zoning by-law amendments. The following commentary is specific to their property, located at 500 Princess Street, and the adjacent 490 Princess Street property in which they have an interest.

The purpose of this letter is to provide supplemental comment related to the proposed policy and regulatory changes affecting the subject site as set out in the Draft Addendum to the Williamsville Main Street Study and its appendices.

On our client's behalf, we request that:

1. The subject site, 490 and 500 Princes Street, be recognized as an appropriate location for increased height and density given its location within the Gateway Character Area;
2. Should the site not be recognized as a taller building site, that criteria for the establishment of taller building sites between the Williamsville Gateways be provided to ensure that the housing goals underlying the WMSS can continue to be met.

### Gateway Site

The draft Addendum states, "*Staff are recommending that additional taller buildings be limited to the City Designation [Destination] and Gateway character areas.*" which suggests that the Gateway Character Area has been found to be a suitable location for greater building height. This character area includes the subject site, however the site is proposed to be limited to six storeys on the height map that accompanies the draft Official Plan amendment. The subject properties collectively represent a site that would be appropriate and suitable for redevelopment with a taller building for the following reasons:

- / The subject site is located within the Gateway Character Area, which the WMSS identifies as an area for redevelopment and an appropriate context to accommodate buildings up to ten storeys.
- / Due to recent investments in the subject property, the economic viability of redeveloping the site is highly dependent on the potential unit yield and, therefore, building height. Should the redevelopment potential be limited to six storeys, it would not be economically viable to redevelop them within the life of the updated WMSS. Section 9 of the draft Addendum states the study is intended to "*[...] spur development and revitalization in an underutilized area of the City*" therefore the proposed maximum height would have the opposite effect for the subject site.

**We request that the subject lands, 490 + 500 Princess Street, be recognized as an appropriate location for increased height and density given their location within the Gateway Character Area.**

### **Achieving WMSS Housing & Density Goals**

Not all properties within Williamsville will be redeveloped at the maximum potential for a number of reasons including the properties being too small or otherwise constrained by heritage or proximity to residential uses. Sites that have recently seen substantial investment, such as the 500 Princess Street property, are also unlikely to be redeveloped in the short to medium term without sufficient incentive. The height map for the draft Official Plan amendment allocates a six-storey height to sites that have recently been fully redeveloped as well, or which are presently being redeveloped, at less than six storeys and which are unlikely to be redeveloped at the full six storeys allocated within the life of the plan. For these reasons, we are concerned that the proposed maximum height of six storeys may not achieve the goal of absorbing 5-7% of the City's residential growth to 2046 (approximately 3,000 units) in Williamsville.

If the maximum height of six storeys is based on achieving a planned unit count, the housing targets may not be achievable as envisioned, which would require site-specific amendments to the Official Plan to accommodate the greater height needed to absorb the required number of units. As such, we recommend the following:

- / That the updated policy documents continue to describe parameters for the development of taller buildings in Williamsville in a site-specific and sensitive context to ensure that the housing goals for the Williamsville Main Street can still be achieved;
- / Consideration should be given to allowing unused height and density from certain sites to be utilized by other sites to allow greater building height. A comparable approach used in some municipalities is the sale of "air rights" for constrained properties, which has the added benefit of supporting heritage conservation. This approach is both logical and consistent with the servicing review and allocation discussed by Utilities Kingston;
- / Should applicants undertake their own financial feasibility analyses and find that as-of-right development is not viable, the above options would support a framework that enables redevelopment to occur in a form which is consistent with the goals of the WMSS.

**We request that policy criteria be provided to enable the development of greater building heights for the purpose of achieving the housing goals for the WMSS.**

We would be pleased to meet with City staff and the consulting team to further discuss our comments. Should you have any questions or comments, please do not hesitate to contact the undersigned at [REDACTED]. We also ask to be notified of status updates related to these applications, as well as of any decision made by Council.

Respectfully submitted,



Youko Leclerc-Desjardins, RPP MCIP  
Senior Planner  
Fotenn Planning + Design



Figure 1: Subject Site (490 + 500 Princess Street) (Source: K-Maps)

Comments on the **Williamsville Transportation Plan Operational Needs Analysis**,  
April 2020 - 19-9291

The interim control bylaw passed on Sept 4, 2020 states: The land use study is being completed in conjunction with a detailed transportation model and study and a review of the servicing capacity, to ensure that the densities considered across the corridor can be supported from a technical perspective without compromising the overall vision to develop into a pedestrian-oriented corridor with a three to four-storey continuous streetwall. (Bylaw Number 2020-111)

Recently someone asked why Princess Street is now referred to as the 'corridor.' What happened to the Williamsville Main Street concept? The current transportation report seems to be all about moving traffic through the area on major roads. Despite architectural renditions of streetscapes with trees and generous sidewalks, the projects developed to date have reinforced this corridor concept and have done little to encourage walkability and commercial development. I understand that there is more to come in the next phase of the transportation study, but I believe the full transportation report should be in place before any further development occurs.

From the Williamsville Transportation Plan -Operational Needs Analysis 2020 : **Appendix A. 4.1.3 Trip Generation – Vehicles** 'The Williamsville area is very close to downtown Kingston and Queen's University and therefore the number of **vehicle trips** generated by the proposed residential developments is anticipated to be relatively low.'

Although the word "student" is not used here, the developers are hoping to sell these buildings for student occupancy. Students do not get in their cars and drive to work like the apartment dwellers at 117 Park St. described in the report. They are in and out many times a day and into the night, on foot, on bikes, on skateboards, on buses and in cars. While they may not use cars daily as much as some other parts of the population, they certainly, in my observation, generate more "vehicle traffic" than single family units.

Once the students return in the fall, there is a huge increase in deliveries of all kinds from pizzas to mattresses. U hauls fill the street. Daily delivery vehicles range from large FedEx trucks to small cars. Friends pick up team mates to go to

hockey practice. Appliance repair trucks appear. Taxis idle in the street waiting to take groups to the bars. How have these “vehicle trips” been counted? There is no reason to believe they will decrease when students live in apartments.

Speaking of traffic generation, as the number of fulltime residents has decreased in Williamsville, so too have the local amenities. I used to have a doctor, a yoga studio, a grocer, a butcher, a few restaurants within walking distance. They have now closed which means I am in my car more driving along Princess St. To date, commercial development has been minimal.

**Appendix D Draft. OPA -Vehicle Access, Loading and Servicing**

**10E.1.40. c. Service and drop-off area circulation shall not interfere with accessible pedestrian circulation.**

Since this happens now, how will it be enforced as the number of vehicles of all kinds increases? Where is the pizza delivery man to park while he waits for his client to appear from the tenth floor to pick and pay for his pizza? What about bikers? How is someone arriving on a bike able to access bike parking on the sidewalk when deliveries block the curbs?

**Appendix A** transportation report states ‘a large portion of the employment growth occurs north and west of Williamsville and therefore it does not travel through Williamsville.’ Why isn’t the growth at Queen’s south of Williamsville considered in the ‘employment calculations’? St. Mary’s on the Lake is to be redeveloped. The growth of the student population will lead to more employees.

My observation is that traffic of all kinds going south from Princess St. has increased in recent years. In fact, the city has put permit parking in parts of the Williamsville area because of Queen’s staff and student parking needed to be controlled.

For safety reasons, a priority should be put on “Green Streets” and cycling routes in Williamsville. The current sidewalks often overflow if two or more students walk abreast. Skateboarders use both the sidewalks and the roads. Bicycles swerve around cars. Cars are driven too fast. Service vehicles for existing Princess St. developments regularly park in no parking spots along side streets blocking bikers.

I have also observed that the bus stop at Princess and Albert, despite the increase in service, sometimes has passengers filling the sidewalk. I can only hope that adequate space for waiting passengers has been planned for as the population is expected to triple the original WMSS plan. I also think some of the bus stops should be moved following the guidelines in the Transportation Assessment, WMSS. 2012 p.23.

With regards to the active transportation going north and south, how will the safety of those crossing Princess Street be dealt with? For example, we know that over 1000 people could live on the north side of Princess St between Albert and Frontenac. In the original WMSS several problem corners, including Frontenac and Princess, were identified as having 'inadequate day light corners' and I have seen no modifications of these to date. (p21, Transportation Assessment, WMSS)

The 2012 assessment also states. 'One of the factors that should also be considered is if the building setbacks at intersections allow for the sufficient pedestrian accommodation at intersection corners. Urban signalized intersections typically experience higher levels of pedestrian activity, and it should be ensured that there is enough space to accommodate pedestrians waiting to cross at signalized crosswalks. 'p19

How has pedestrian accommodation been considered in developments to date and how will it be rectified in the future? The width of the current sidewalk with the additional one metre set back is completely inadequate. Staff recognize this in the addendum and yet construction continues. Why have modifications not been made to proposed developed before it is too late? From what I have seen I can only assume that those properties that crowd the sidewalk will not be as desirable, especially for commercial occupancy, as those built in the future with wider setbacks.

The final paragraph of transportation report reads: "It is critical to develop a vision for the study area transportation network. This operational assessment should be revisited once this vision has been developed to determine how the needs of transportation modes can be balanced to support the growth in Williamsville and the City of Kingston. "



I think we need more than a vision. We need a plan **now** to put safety first with wide sidewalks, clear intersections, appropriately bus stops and loading zones and a better understanding of all of the types of traffic and its impact on Williamsville.

Joan Bowie  
414 Albert St.  
Kingston.

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## Review of Williamsville Main Street Study

Prepared by John Grenville, 30 September 2020

The original Williamsville Main Street Study (WMSS) was prepared with significant public consultation, broad acceptance by the residents and promise to ensure compatible development and infill while protecting the residential zones on either side of Princess Street. The approved and constructed buildings have not fulfilled the expectations because of the height of the buildings, insufficient setback resulting in too many functions in the road/public space, inadequate protection of adjoining low-rise neighbourhoods, lack of adherence to the angular plane, and confusion in the by-law over the rear lot line. The current situation has the beginnings of an urban canyon and an uninviting vehicle-oriented corridor or throughway rather than the future vision of a city and community destination with thriving neighbourhoods both north and south of the Williamsville Main Street.

I am pleased to see the limit on building heights reinforced with a four-storey street wall and a setback for the fifth and sixth storey. Increasing the setback from the front property line provides much needed space to accommodate the many functions that have been identified for the street and sidewalk. Also, attention to the impact on heritage on the side streets is an important consideration.

However, I have some concerns:

***Protection of Adjoining Residential*** – The protection of residential zones that adjoin Princess Street was one of the primary concerns (and in some cases the only concern) when the Williamsville Main Street Study was being done. One of the guiding principles for the study was “Protect existing residential areas from negative impacts.” One of the definitions of success for the WMSS review is “Respect for, and a wish to get closer in implementation to, the "original vision/intent" of the Williamsville Study.” Despite this definition of success, the report states that the proposed changes will continue “to provide mitigation for transitions to adjacent residential neighbourhoods, but with a reduced focus on potential perceived impact to individual dwellings and more emphasis on/support for broader public interest goals. (Staff Report, pg. 9). The report also refers to the “Lack of trust in staff due to perceived difference in what was promised by the public consultation related to the Study and what has transpired in terms of development approvals” (Staff Report, pg. 9)

I don't know how we are going to get closer to the original vision and protect existing residential areas from negative impacts when the report proposes “a reduced focus on potential perceived impact to individual dwellings.” I don't know what is meant by “potential perceived impact to individual dwellings” because it is not mentioned again in any of the draft material. But I can tell you exactly what it is like to have a five-storey building constructed 6 metres away and to have about 40 windows overlooking your backyard with an underground garage entrance on the lot line. That's the situation for our property at 515 Frontenac Street.

Overlook prevails, privacy is virtually non-existent, sunshine will only be available in the summer, not in the winter when we need it most and vehicles for 99 units will be coming and going to the underground garage at all hours.

“Support for broader public interest goals” should not mean that impact on individual property owners must be diminished. Eliminating the rear lane and 45-degree angular plane and replacing it with an 8-metre rear lane adjacent to a 6-storey building does little to protect the low-rise residential. Part of the problem can be mitigated by adopting the measures that are in the *Ottawa’s Urban Design Guidelines for High-rise Buildings* ensuring that the new development does not loom over the low-rise residential. At the very least there should be a stepback above the third storey where buildings abut residential zones. Part of it can be further mitigated by eliminating balconies and roof-top patios on buildings that overlook low-rise residential. But most of all, part of the problem can be mitigated by maintaining the angular plane at least in part.

But even the 8-metre setback seems to be quite elastic when the report says that “at the City’s discretion, where a rear laneway is undesirable for a particular lot, the 8-metre setback may instead include landscaping or other functional elements.” (Addendum, pg 32) A rear laneway will never be “undesirable” because vehicle access across the Princess Street sidewalk will continue to be discouraged. I am not sure when the City would apply discretion but it’s hard not to be sceptical and to think of an entrance to an underground garage as a “functional element” or that it will include anything else that a developer sees as a “functional element.” Unfortunately, scepticism does not build trust. In another place it speaks to the issue and suggests that “In some cases at the city’s discretion, it may be more appropriate to provide a low-rise transition to adjacent built form, in which case the setback from an adjacent residential lot will be no less than 2 metres. (Addendum, pg 15) I have heard numerous times that the reason for an updated OP and Zoning By-Law was to provide certainty as to what could be done. How do phrases such as “at the City’s discretion” provide any degree of certainty at all? Doesn’t this approach just continue with what staff report has identified as “complex and difficult to understand procedures”? (Addendum, pg 40)

To come back to the original question as to what is meant by moving toward a “reduced focus on potential perceived impact to individual dwellings and more emphasis on/support for broader public interest goals.” It appears that instead of “broader public interest goals” the changes in the setback, at least in this instance, will increase the options and opportunity for the developer to increase the value of the land rather than protecting “attractive, predominantly low-rise residential character” (Staff Report, pg. 7). This does not build trust.

**Land Use Compatibility** – Somewhat related to the above, is the recommendation for the complete abrogation of section 2.7 of the Official Plan because it could be seen to “discourage development that is in the public interest, in favour existing development” and because “staff have already determined compatibility of the proposed permissions for the corridor.” (Addendum, pg 35) The proposed revision to the OP states that “an appropriate built form

transition to adjacent residential neighbourhoods” is already in place by virtue of section 10E of the OP. There are many places in the OP where similar ideas are expressed in multiple places. If we are now deleting sections of the Official Plan that might discourage development and where staff have already determined compatibility, we will have a long list of sections to delete. This type of suggestion is deleterious to building trust.

**Green Streets** - The staff report gives “green streets” a total of 6 lines in the report (Addendum. pg 19, 20) and simply says that “at present, this has not been implemented and similar to the review of the right-of-way design for Princess Street, the incorporation requires redesign of the existing side street cross-sections to accommodate additional trees and other landscape elements.” What does “a redesign of the existing side street cross-section” and why has this not been done in almost 8 years since Council unanimously approved the Williamsville Main Street Study. For years we have been asking how and when the green street concept is going to be implemented. It is disconcerting to learn that there is no plan and no schedule to develop a plan.

Despite the lack of a plan, the City has approved community benefits for two locations to provide funding for Green Streets: one development at 575 Princess Street, the 10-storey development between Frontenac and Albert, and the other at 652 Princess, the 10-storey development under construction between Nelson and Victoria. The community development funding totals \$460,000. Green Streets were identified as a important element of the Williamsville Main Street Study (2012); Council has identified the importance of the urban forest especially in light of the Climate Emergency; Council has identified almost \$500K of community benefit money for Green Streets; the Province has identified the need for Green Infrastructure in the recently released Provincial Policy Statement and Green Streets are one of several elements of the Williamsville Main Street Study that was strongly supported by Williamsville residents. Even the City’s primary consultant on *Density by Design*, Brent Toderian has stated “Density done well includes more green design options” and has identified the importance of “integrating green everywhere.” Why has such an important recommendation of the Williamsville Main Street been left to languish as if the recommendation had never been made and unanimously approved by Council? This is disappointing to say the least.

Recently, three 100-year old maple trees on the city boulevard were destroyed in order to build 501 Frontenac Street. I know that the developer was supposed to pay \$30,000 in this Faustian bargain so that he could destroy these trees. However, the ornamental fruit trees that are supposed to replace them will never provide the same public benefit that was provided by these maples. Would it have been different if the Green Streets plan had been in place with the requirement for a 3 metre setback (rather than less than a metre) and a site plan that met the requirements of the Green Streets cross-section? Is 3 metres enough? Where does the 3 metre setback actually apply – just within the WMSS subject area or on either side of Princess Street for the length of Alfred, Frontenac, Albert and Nelson from the Memorial Centre to Victoria Park? The lack of action on this initiative has been one of the most disappointing aspects the implementation of the Williamsville Main Street Study. Based on the 6-line Green Street section, there does not appear to be any effort to get it in place any time soon. Is a 3-

metre setback enough to implement Green Streets? Don't we have to see the cross-sections before we are sure? The staff report for the WMSS review must indicate what is going to be done in terms of planning for Green Streets and when the plan will be in place.

**Parkettes** – Another green concept that was strongly supported by Williamsville residents was the development of parkettes on Princess Street. Although the staff report talks about four locations where parkettes “have been secured or are currently being negotiated along Princess Street” only one has actually been secured. One of them is an easement for which no details are available and is not a municipal parkette, and the two others are part of a development proposal that was presented more than a year ago with parkettes that were completely inadequate. So, despite five approved multi-storey projects (including 565 Princess Street which, according to the ZBA, has a requirement to be “consistent with the City’s long term vision for the Williamsville Main Street Study”), only one parkette has been secured and it has yet to be put in place. The Williamsville Main Street Study identified the importance of parkettes, a Climate Emergency has been declared by Council and Council has confirmed the importance of greening the City. I previously noted that Brent Toderian said that green space is critical in building density. Staff have identified how important open spaces are in various reports – “As intensification occurs, and more people live and work in the area, it is important that the main street be supported by new open spaces that allow residents access to outdoor space, that improve the pedestrian experience of the streetscape, and that bring people to the area.” (Public Meeting Report, 525 & 555 Princess St., pg. 18) Yet, without even one parkette having been built on Princess Street, the staff report states : “An over-supply of parkettes in the Williamsville Corridor may lead to their underuse.” (Addendum, pg 16) I don't disagree, but why is this relevant. This statement is being made for a part of Princess Street that has undergone significant growth and is forecast to undergo even significantly more and in a district that already has the lowest per capita parkland in the municipality. Why has this statement been made? What criteria are staff using to determine when the Williamsville Main Street has an over-supply of parkettes? Including this statement makes it sound that planning staff have already concluded that if the Chatham and Alfred Street corners are done, that will be enough. If that statement remains in the report, staff should show how they will determine when an over-supply is reached.

**WMSS – Success or Failure?** – The staff report is confusing as to whether the WMSS has been a success or a failure. On one hand it speaks to needing “an approach that allows many/most individual projects to be viable under reasonable assumptions, with enough projects "green lit" in the short to medium term” (Staff Report, pg 2) and refers to “permissions not favourable for private market development” (Staff Report, pg. 8). On the other hand, the report refers to the “incredible success” (Addendum, pg 27) and how the current plan resulted in “a 15-year supply within the first seven years of the current policy and zoning framework (2013-2020).” (Addendum, pg 11) Why does the Planning Department feel compelled as one its objectives to make changes to ensure that the new conditions are “favourable for private market development”? If the City can achieve its goals under the current OP and zoning by-laws, why

are changes being made that “provide mitigation for transitions to adjacent residential neighbourhoods, but with a reduced focus on potential perceived impact to individual dwellings and more emphasis on/support for broader public interest goals.” I read this as saying that the Williamsville Main Street plan has been successful but changes are going to be made to make it easier for developers but there will be an impact on individual dwellings. Is this correct? While we feel that the WMSS needs to be reviewed, it certainly appears that it does not need to be reviewed so that there is a “reduced focus on potential perceived impact to individual dwellings and more emphasis on/support for broader public interest goals.” I don’t believe that the logic is sound. Either the WMSS has been successful and much development has taken place OR changes need to be made in order to make the WMSS successful but not at the expense of the owners of adjoining property.

**Parking** – There are two issues related to parking: (1) change of use to create new surface parking and (2) the parking ratio. The OP and Zoning By-Law for Williamsville Main Street makes it clear that the creation of new surface parking lots is not an allowed use. In order to facilitate construction and transition to a new Williamsville main street, the City passed a temporary use by-law (2015, renewed in 2018) to permit surface parking lots as a short-term use. Although new parking lots continue to be created, I have never seen a request for a change in use which would trigger a site plan to control the use and appearance. How is this possible? Why have staff not dealt with the new parking lots?

In terms of the parking ratio, the staff report notes that “Council has commonly approved reductions in parking to a ratio of 0.5 parking spaces per dwelling unit” and that “staff are recommending a temporary reduction in required parking within Williamsville to 0.5 spaces per dwelling unit.” (Addendum, pg 39). The last parking study that was done for Williamsville by MMM Group recommended that developers provide 0.75 parking spaces per unit in both the downtown and harbour as well as Williamsville Main Street. Although this rate of 0.75 spaces per unit was extremely low in comparison with all other cities, the rate of 0.50 spaces per unit is even lower.

MMM’s report also states that “specifying parking requirements by unit size better reflects actual demand” and that this approach is more common in municipalities that have recently updated their zoning. Given the tremendous variation in the number of bedrooms for the units in Williamsville, a parking ratio related to the number of bedrooms makes more sense. Given that the last parking study recommended 0.75 spaces per unit, why is 0.50 being recommended as the interim requirement? Given the length of time that it has taken to make changes in the zoning by-law, how long will the new parking ratio of 0.50 spaces per unit remain in effect without an updated parking study?



### ***Miscellaneous Questions***

- Why isn't there any indication about how inclusionary zoning could be incorporated into the proposed changes to the WMSS? Or why inclusionary zoning is not being considered?
- What does "green-lit" or "cross-section" mean? When planning jargon is used in a public document they should be defined.
- Why aren't there some diagrams or images to illustrate the proposed changes? For example, there should be a diagram comparing what is in effect now to protect low-rise residential with what is being proposed.
- How are the proposed 20-storey buildings for the southwest and northwest corners of Division and Princess substantiated? Why 20 storeys? Why not 14 storeys or some other height like 25 storeys? Wasn't this area already included in the WMSS area? What impact does this have on the heritage buildings that are in the block that includes the southwest corner?

John Grenville, 30 September 2020

**From:** [Gummo,Andrea](#)  
**To:** [Bolton,Sonya](#)  
**Subject:** FW: Williamsville feasibility study comments  
**Date:** October 19, 2020 12:39:56 PM

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**From:** Glen McCurdy [REDACTED]  
**Sent:** Friday, October 16, 2020 5:55 PM  
**To:** Gummo,Andrea <agummo@cityofkingston.ca>  
**Subject:** Williamsville feasibility study comments

Hello,

I am writing with regard to the Williamsville feasibility study, and with reference to the engagement session from oct 14.

In the presentation on the financial feasibility. The scenarios considered only proposed rental buildings with a majority of small units. The developers of the existing buildings in Williamsville are quite up front with their intention of marketing them towards absentee investors and student occupants. These are in effect private student residences.

The site of the Williamsville corridor is a commercial "Main Street". Well served with a central location, transit, and surrounding residential. The effective and successful commercial main streets are majority commercial, and work space, with mixed living facilities. Similar to Toronto King St, Queen St, or Ottawa Bank street.

The commercial and mixed use of the Main Street character is most effective for development feasibility with lower build costs and higher rents. It also serves the area well by enabling employment, streetscape, and community, and a transit hub.

So why is a promising main street being changed into a student residence? This conflicts as the student rental occupants don't want "Corridor" traffic nor transit adjacent. This is changing the main street into a hotel district for tenants on 1 and 2 year leases, and would displace long term residents and commercial development.

In the current state, the Williamsville street scape is quite unpleasant. The new building have pushed blank concrete walls to the edge of the street leaving little space for pedestrians between the line of cars and the concrete brick (see 630 princess).

Please consider streetscape, wider sidewalks and ground floor 'street facing' commercial in the future development requirements.

Also in the financial feasibility analysis, the cost to developers of construction, and development fees was frequently raised as a justification for adding more residential units to the structure (developers haven't proven this is actually the case)

However what seems to be missing in the plans to resolve the feasibility/cost issues is the City's contribution to the cost. Building code, labour requirements, regulations, and development approval policies are a large issue in restricting capital development and the City can reduce these consequential costs across the city at will. Some lobbying for provincial regulations would also be needed.

Please consider adding regulatory reform to the recommendation to council recommendations. I would not be surprised if the planning consultants on the project would have a list of regulations that are costly and impeding developer progress.

Thank you and Regards,  
Glen McCurdy  
Kingston, On

**From:** [Joan Bowie](#)  
**To:** [Bar James](#); [Bolton,Sonya](#); [Gummo,Andrea](#)  
**Cc:** [John Grenville](#); [Neill,Jim](#)  
**Subject:** Re: Private surface parking Report File Number: D14-030-2018  
**Date:** October 1, 2020 2:14:48 PM

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Hello James,

Once again, over a year later, I am writing to ask if any applications for temporary surface parking lots have been received? It appears one continues to operate at the corner of Alfred and Princess St. Some of the others I had asked about are now construction sites.

I am still waiting for a reply from By-Law enforcement on the new apparently " permanent" paved parking lot at 556 Princess St . As you may recall , this property, had applied for new zoning for an apartment building and somehow instead became an empty lot, then a gravel parking lot and now a paved lot. What kind of permit allowed this to happen? How will something like this be prevented in the future? We are in need of affordable housing, which the pre-existing building was, and parkettes, which this could have become!

Since the review of the WMSS is underway, I would like my questions about the lack of enforcement of the Temporary Use By-Law to Permit Surface Parking Facilities and the new paved parking lot at 556 Princess St. to be part of the official correspondence.

Thank you, Joan Bowie

On Aug 19, 2019, at 12:06 PM, Joan Bowie [REDACTED] wrote:

Hi James,

Thank you for your reply. The former site of 556 Princess St. is now full of parked cars. I appreciate your notifying By-Law Enforcement whom I contacted months ago about various lots that appear to be operating outside the by-law. This being a NEW lot makes me crazy. The WMSS was all about reducing the amount of paved lots along the corridor.

I look forward to reading your extensive notes on the proposed new developments at Princess and Alfred.

Cheers,Joan

On Aug 19, 2019, at 10:50 AM, Bar,James <[jbar@cityofkingston.ca](mailto:jbar@cityofkingston.ca)> wrote:

Hello Joan,

Great seeing you at the last Planning Committee Meeting. Hope you have been well!

We have not received any applications to date for temporary surface parking lots in the Williamsville Corridor. I have notified By-law

Enforcement who will be looking into the matter at 556 Princess Street.  
If you have any further questions, please do not hesitate to contact me.  
Thank you,

[<image001.png>](#)

**James Bar, MPI,  
MCIP, RPP**  
Senior Planner  
Planning Building and  
Licensing Department  
City of Kingston  
1211 John Counter  
Boulevard,  
216 Ontario Street  
Kingston, ON K7L 2Z3  
613-546-4291 ext.  
3213  
[jbar@cityofkingston.ca](mailto:jbar@cityofkingston.ca)

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**From:** Joan Bowie [REDACTED]  
**Sent:** Thursday, August 15, 2019 10:28 PM  
**To:** Bar,James  
**Cc:** Agnew,Paige; Neill,Jim; John Grenville; Hart Cantelon; Hurdle,Lanie  
**Subject:** Re: Private surface parking Report File Number: D14-030-2018  
Hello James,

Once again I am asking if you have received any applications for temporary surface parking lots in the Williamsville corridor. Today, the "lot" where 556 Princess used to be, was paved with asphalt. No sign of a site plan control application. Perhaps it is no longer a site for development? One of the objectives of the WMSS was to reduce the amount of surface parking . How was this allowed?  
Thanks,Joan

On Jul 9, 2019, at 2:18 PM, Bar,James <[jbar@cityofkingston.ca](mailto:jbar@cityofkingston.ca)> wrote:  
Hello Joan,

Thank you for following up. We have not received any applications for temporary surface parking lots within the Williamsville Corridor. The City is actively working on enforcement cases as identified by Stewart Waldron in the attached emails given the addresses provided below. As identified in the attached emails, we cannot share the details of enforcement cases. If a planning application is submitted for one of the below addresses or another address, it will be publically viewable. You can keep checking in with me to understand if a site plan control application is been submitted for a temporary surface parking lot. Thank you and hope all is well,

[<image001.png>](#)

**James Bar, MPI,  
MCIP, RPP**  
Senior Planner  
Planning Building and  
Licensing Department  
City of Kingston  
1211 John Counter

[<image002.png>](#) [<image003.png>](#) [<image004.png>](#)

Boulevard,  
216 Ontario Street  
Kingston, ON K7L 2Z3  
613-546-4291 ext.  
3213  
[jbar@cityofkingston.ca](mailto:jbar@cityofkingston.ca)

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**From:** Joan Bowie [REDACTED]  
**Sent:** Tuesday, July 09, 2019 12:45 PM  
**To:** Agnew,Paige  
**Cc:** Neill,Jim; Bar,James; John Grenville; Hart Cantelon; Hurdle,Lanie  
**Subject:** Re: Private surface parking Report File Number: D14-030-2018  
Hi Paige. Thank you for your reply.

I understood from previous emails on this topic that Lacricia's staff was looking into the addresses that I sent May 22nd. I was hoping by now to see some applications coming forward to planning . We certainly need something to improve the streetscape which plantings that buffer the parking lots could do. I understood that this was the one of the reasons for adding this zoning by-law.

I have included my note to Lacricia below.

Thanks, Joan

Hi Lacricia,

Thank you for your reply.

The surface parking appears to me to be on sites that are for proposed developments. The addresses are not quite clear since the developers have bought up several lots/buildings in some cases.

These four sites are addresses that I took from a map of Princess St. 556, 531, 579-601, 499- 495.

I appreciate you looking into this matter. My hope is that site plan reviews will be necessary and improve the appearance of the street.

Joan Bowie

On Jul 8, 2019, at 12:27 PM, Agnew,Paige <[pagnew@cityofkingston.ca](mailto:pagnew@cityofkingston.ca)> wrote:

Hi Joan,

Thanks for your message. We have not received applications for temporary parking lots along this stretch of Princess Street. If you have concerns about specific properties related to legal use please forward the addresses and I can have our team do some follow-up with the property owners.

Thanks,

Paige

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**From:** Neill,Jim  
**Sent:** July 8, 2019 10:11 AM  
**To:** Joan Bowie  
**Cc:** Bar,James; John Grenville; Hart Cantelon; Hurdle,Lanie; Agnew,Paige  
**Subject:** Re: Private surface parking Report File Number: D14-030-2018  
TY Joan for keeping me in the loop. I've taken the liberty of adding our CAO and Paige Agnew, our Director of Planning who has just returned from holidays.  
Jim

Sent from my iPhone

On Jul 8, 2019, at 9:40 AM, Joan Bowie [REDACTED] wrote:

Hello James,  
Following up on this issue , has the Planning Department received any applications for zoning changes for temporary parking lots along the Williamsville corridor as described in Report D14-030-2018.  
Thank you , Joan

On May 22, 2019, at 8:44 AM, Bar,James

<[jbar@cityofkingston.ca](mailto:jbar@cityofkingston.ca)> wrote:

Good morning Joan,  
I am not aware of any applications for temporary parking lots.  
Please contact By-law with your concerns.

<[image001.png](#)>

<[image002.png](#)> <[image003.png](#)> <[image004.png](#)>

**James Bar, MPI,  
MCIP, RPP**  
Senior Planner  
Planning Building and  
Licensing Department  
City of Kingston  
1211 John Counter  
Boulevard,  
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Kingston, ON K7L 2Z3  
613-546-4291 ext.  
3213  
[jbar@cityofkingston.ca](mailto:jbar@cityofkingston.ca)

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**From:** [Emma Stucke](#)  
**To:** [Mark Touw](#); [Bolton,Sonya](#)  
**Cc:** [Gummo,Andrea](#); [Agarwal,Sukriti](#); [Wicke,Chris](#); [Derek Hull](#)  
**Subject:** RE: Williamsville Main Street Land Use Planning Study  
**Date:** August 7, 2020 10:32:35 AM  
**Attachments:** [image001.png](#)  
[image002.png](#)  
[image003.png](#)  
[image004.png](#)  
[image005.png](#)  
[image006.jpg](#)  
[image007.jpg](#)  
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[image009.png](#)  
[image010.jpg](#)  
[image011.jpg](#)  
[image012.jpg](#)

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Hi Sonya,

We and our client and have reviewed the proposed policies for Williamsville Main Street Study Area. Our initial review is positive and the owners are satisfied with the proposed policies for 429 and 445 Princess St. We will continue to review and provide comments as necessary. We ask that you please keep us apprised of any changes or updates to the policies moving forward.

Thank you,

Emma

**Emma Stucke**

**IBI GROUP**

650 Dalton Avenue

Kingston ON K7M 8N7 Canada



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**From:** Mark Touw [REDACTED]  
**Sent:** Tuesday, February 25, 2020 4:21 PM  
**To:** Bolton,Sonya <[sbolton@cityofkingston.ca](mailto:sbolton@cityofkingston.ca)>  
**Cc:** Gummo,Andrea <[agummo@cityofkingston.ca](mailto:agummo@cityofkingston.ca)>; Emma Stucke [REDACTED]  
Agarwal,Sukriti <[sagarwal@cityofkingston.ca](mailto:sagarwal@cityofkingston.ca)>; Wicke,Chris <[cwicke@cityofkingston.ca](mailto:cwicke@cityofkingston.ca)>; Derek Hull [REDACTED]  
**Subject:** RE: Williamsville Main Street Land Use Planning Study

Thanks Sonya, we look forward to reviewing the draft policies, including any adjustments to the boundaries of the policy area to include the whole of the Shopper's parcel and associated parking lot.

Thanks,

Mark

**Mark Touw** M.C.I.P., R.P.P

**IBI GROUP**



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**From:** Bolton,Sonya <[sbolton@cityofkingston.ca](mailto:sbolton@cityofkingston.ca)>  
**Sent:** Tuesday, February 25, 2020 9:15 AM

**From:** [Fiona Charles](#)  
**To:** [Neill, Jim](#)  
**Cc:** [Mayor of Kingston](#); [Gummo, Andrea](#); [Bolton, Sonya](#); [Jill Shefrin](#)  
**Subject:** Response to the Draft Addendum to the Williamsville Main Street Study  
**Date:** September 28, 2020 3:19:35 PM

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To the Planning Committee:

The Williamsville Main Street study envisioned transforming a neglected strip of Princess into a vibrant neighbourhood hub. It was to create liveable, walkable urban space with small businesses serving local needs: a true main street integrated with the Williamsville community.

The Planning Department's Draft Addendum to the study turns that strip into a barren traffic corridor, with walls of tall buildings unalleviated by greenery or parkettes, and minimal setbacks from the sidewalk. Williamsville already has the city's lowest allocation of public green space per capita.

The so-called "addendum" is in fact a complete betrayal of the study's principles and of the neighbourhood's residents.

At the Planning Committee meeting where the draft was presented, the planners consistently referred to "The Corridor", indicating their view of Williamsville as a traffic pass-through, rather than as one of the city's oldest neighbourhoods.

At the February 12 meeting where planners sought public input on the current direction of Princess Street development, they acknowledged a community lack of trust in the Planning Department. They reiterated this in the addendum, yet it totally ignores concerns raised by the community.

Regardless of established limits, developers will demand zoning exemptions, which the Planning Department will—based on past and current performance—surely recommend for approval.

The addendum proposes adding housing for 7,000-8,000 additional people. The Transportation Study puts that figure at 12,000+. Kingston Utilities says they can provide the requisite infrastructure.

But where is there provision for the other services all these people will require? Where are the schools? the fire and ambulance stations? the parks? the community centres and swimming pools? (Artillery Park is already at or beyond capacity.)

Why are developers not being required to fund and build these essential services? And where will they be built?

The planners assert, without evidence, that it is no longer economically viable for developers to build less than 10 stories. They want to ensure "certainty" for developers (but apparently not for the neighbourhood). Developers are entrepreneurs, risk-takers by definition. They shouldn't expect certainty.

The City's primary responsibility should be to residents and local businesses. That is not

reflected in this draft addendum.

Fiona Charles and Jill Shefrin  
Alfred St., Williamsville

**From:** [Michael Keene](#)  
**To:** [Gummo,Andrea](#); [Bolton,Sonya](#); [Agnew,Paige](#)  
**Cc:** [martin.skolnick@gmail.com](mailto:martin.skolnick@gmail.com)  
**Subject:** Williamsville comments - Princess and Frontenac  
**Date:** September 30, 2020 12:55:06 PM  
**Attachments:** [image001.png](#)  
[image002.png](#)  
[image003.png](#)  
[image004.png](#)  
[572-574 Princess St & 464 Frontenac St Williamsville Comment Letter, Fotenn, Aug-12-2020.pdf](#)

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Good afternoon Andrea and Sonya,

We know you are coming to the finishing line with respect to your recommendations for Williamsville. Based on conversations with Staff we are concerned that you do not believe it is important to include 464 Frontenac Street within the Williamsville designation. You have asked for planning reasons which we believe are outlined in our letter from August and have been reiterated through our various conversations.

One further point we would like to make relates to the redevelopment of the site. First reiterating that with this being a single property, all of the buildings operating as a integral part of site. For example they share parking, amenity and landscaped areas. 464 Frontenac cannot be stripped out of the site. While we did not expect a disastrous event to occur on the property if one were to occur the owners would redevelop the site in a comprehensive way, considering a new layout that would see buildings fronting onto all of the streets.

With these additional thoughts in mind we again ask that as part of your final recommendations to the planning committee you include all of 464 Frontenac and 572-574 Princess Street within the Williamsville designation.

In the event this change is not included, we have instructions from our file to file an appeal to the LPAT. I really hope it doesn't need to come to this as it would be a waste of resources for both my Client and the City.

**Michael Keene, MCIP RPP**

Principal, Planning + Development

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**FOTENN**

The Woolen Mill

6 Cataraqui St, Suite 108

Kingston, ON K7K 1Z7



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**Comment and Response Matrix**  
**Draft Addendum to the Williamsville Main Street Study (July 24, 2020)**

Theme or Site-Specific Address	Questions and/or Comments	Response
1. Document Accessibility and Comprehension	<ul style="list-style-type: none"> <li>a. DASH is not a user-friendly way to access the draft addendum documents.</li> <li>b. Difficulty understanding the draft document and the terms used within it.</li> <li>c. What does “green-lit” or “cross-section” mean? When planning jargon is used in a public document they should be defined.</li> </ul>	<ul style="list-style-type: none"> <li>a. The draft addendum documents have now been made available on the City’s website as well.</li> <li>b. Additional definitions have been added to the zoning for the Williamsville Main Street, and terms have been explained further in the Addendum. Documents have been edited for clarity.</li> <li>c. Thank you for this reminder. Additional definitions have been added to the zoning for the Williamsville Main Street, and terms have been explained further in the Addendum.</li> </ul>
2. Boundary Adjustments	<ul style="list-style-type: none"> <li>a. The boundary of the Williamsville Main Street Study Area has been inconsistently defined as it relates to side streets.</li> <li>b. Request that 236 Nelson Street be included within the boundary of the Williamsville Main Street Study Area.</li> <li>c. Request that the 464 Frontenac Street site be included within the boundary of the Williamsville Main Street Study Area.</li> </ul>	<ul style="list-style-type: none"> <li>a. Minor boundary adjustments are being proposed as part of a boundary rationalization and update. Revisions were intended to improve consistency between the Official Plan and the Zoning By-Law, and to “clean up” areas where zoning lines cut through properties or buildings.</li> <li>b. Site-specific requests are addressed at the end of this table.</li> <li>c. Site-specific requests are addressed at the end of this table.</li> </ul>
3. Public Consultation	<ul style="list-style-type: none"> <li>a. Developers who own property in the area would like to be more involved and up-to-speed. Ideally, the City</li> </ul>	<ul style="list-style-type: none"> <li>a. The document must be made available to all groups in advance of the Public Meeting. The Public Meeting on August 13, 2020 was a</li> </ul>

Theme or Site-Specific Address	Questions and/or Comments	Response
	<p>should meet with developers before the Public Meeting on August 13, 2020.</p> <p>b. KCAT would ask that decisions on this report be delayed until we, and others, can spend time digesting the material and make reasoned reactions.</p> <p>c. Confirm if the public will have an opportunity to review the draft addendum, Official Plan, and zoning by-law amendment updates prior to bringing a comprehensive report to Planning Committee in November 2020.</p>	<p>good opportunity for everyone to learn about the proposed changes. The project team has since had additional meetings by request to answer questions and receive feedback.</p> <p>b. Same response as sub-section a. above, and project team members met with KCAT representatives</p> <p>c. The revised draft Official Plan amendment was made available 20 days prior to the November meeting, while the comprehensive report, including the recommended amendments, will be made available to the public one week before the regular meeting at Planning Committee, when the committee's agenda is released to the public.</p>
4. Height and Density	<p>a. Provide justification for a six-storey building height maximum when the financial feasibility study prepared by Watson and Associates concludes this is not economically viable.</p> <p>b. Provide consideration for future unused height and density.</p> <p>c. Provide locations for additional tall buildings, beyond the intersection of Princess Street and Division Street, within the Williamsville Main Street Area.</p> <p>d. How are the proposed 20-storey buildings for the southwest and</p>	<p>a. The report by Watson and Associates did not indicate that all six-storey development is not feasible, it concluded that the current zoning provisions are likely not feasible. Therefore, staff are proposing changes to the zoning to provide clarity about the location of taller buildings and the expectations around built form, along with reductions in parking requirements. Staff have had members of the development community indicate that small changes (e.g. less parking, fewer studies, etc.) can add up when examining the feasibility and viability of a project.</p> <p>b. The Williamsville Main Street Study and Addendum represent a 25-year, long-term</p>

Theme or Site-Specific Address	Questions and/or Comments	Response
	<p>northwest corners of Division and Princess substantiated? Why 20 storeys? Why not 14 storeys or some other height like 25 storeys? Wasn't this area already included in the WMSS area? What impact does this have on the heritage buildings that are in the block that includes the southwest corner?</p> <p>e. The planners assert, without evidence, that it is no longer economically viable for developers to build less than 10 stories. They want to ensure "certainty" for developers (but apparently not for the neighbourhood). Developers are entrepreneurs, risk-takers by definition. They should not expect certainty. The City's primary responsibility should be to residents and local businesses. That is not reflected in this draft addendum.</p>	<p>planning vision for the area. As such, it is not anticipated that all development will occur immediately following adoption of the proposed amendments. Redevelopment proposals will be brought forward at the discretion of individual property owners based on the specific context. The study area has been planned to accommodate five to seven percent of the City's overall growth over this time, with permissions for approximately 5,600 units based on modelling projections and proposed zoning permissions. An air rights approach is not being considered at this time; the intent of the Interim Control By-Law and the proposed amendments is to clearly define the locations where additional height is permitted. This is being addressed via a height map (Exhibits A &amp; B).</p> <p>c. The 20 storey height in the Division Street area was initially proposed in part based on the existing height of the Princess Towers building. To ensure new development does not maintain Princess Towers as the "landmark" in this area, it was proposed that a small cluster of buildings slightly taller than this existing tower would be most effective. This also ensures that height is clustered in the area, rather than inserted sporadically throughout the corridor. Extensive modelling undertaken following this initial concept confirmed that a 20 storey height, at the</p>



Theme or Site-Specific Address	Questions and/or Comments	Response
		<p>maximum floorplate size proposed, allows for the needed number of units in the area, and is financially viable. The heritage status of existing properties in the area under the <i>Ontario Heritage Act</i> is not proposed to change; future development proposals on designated properties would be required to obtain Heritage Act approval by Council in accordance with the requirements of the Act.</p> <p>d. See response to sub-section c. above.</p> <p>e. Staff have not concluded that anything less than 10 storeys is unviable. Through the update process, staff have gathered evidence that suggests that there are likely viability challenges with the current zoning permissions and are recommending refining these permissions as proposed. The centre section of the corridor will maintain a six-storey height limit, with different as-of-right permissions related to setbacks, stepbacks, and parking, for example, which serve to contribute to financial feasibility.</p>
5. Ground Floor Commercial Requirements	<p>a. Ground floor commercial requirements must be flexible enough to keep up with existing and emerging trends.</p> <p>b. Ground floor residential in the appropriate locations is better than long-term vacancies.</p>	<p>a. The policies and zoning provisions for the Williamsville Main Street reflect design requirements for ground floor commercial uses (i.e. height and at-grade access) while allowing flexibility for ground floor residential uses in specific areas. The maps in the Official Plan and Zoning By-Law have been revised to ensure that the mandatory</p>

Theme or Site-Specific Address	Questions and/or Comments	Response
	<p>c. Include design guidelines and policies to encourage at grade residential to contribute to the streetscape.</p>	<p>commercial frontage is shown in the correct locations, as per the original Study. For clarity, no changes are proposed at this time to locations where ground floor commercial uses are required.</p> <p>Planning services staff recognize and are monitoring current challenges to commercial operators in the area including personal services and retail, which have been exacerbated by the COVID 19 Pandemic. Additional study including a City-wide commercial inventory is scheduled for 2022.</p> <p>b. See response to sub-section a. above.</p> <p>c. See response to sub-section a. above.</p>
<p>6. Land Use Compatibility</p>	<p>a. Is the recommendation for the complete abrogation of Section 2.7 of the Official Plan because it could be seen to “discourage development that is in the public interest, in favour existing development” and because “staff have already determined compatibility of the proposed permissions for the corridor”. If we are now deleting sections of the Official Plan that might discourage development and where staff have already determined compatibility, we will have a long list of sections to delete.</p>	<p>a. Land use compatibility remains an important consideration. Section 2.7 of the Official Plan as currently written applies land use compatibility considerations consistently across the city (i.e., in urban, sub-urban and rural contexts) and prioritizes all existing development over any new development. It is important to apply context-specific criteria for identified growth areas, where we can review compatibility and adverse impacts specifically based on the urban context.</p> <p>Staff have edited this section for greater clarity.</p>

Theme or Site-Specific Address	Questions and/or Comments	Response
7. Parking	<p>a. Incenting development through reduced parking requirements will not work. We have a parking pandemic in the downtown. Parking is a huge part of downtown business. The City will push people out of the core and will push parking problems into surrounding neighbourhoods.</p> <p>b. Given the tremendous variation in the number of bedrooms for the units in Williamsville, a parking ratio related to the number of bedrooms makes more sense. Given that the last parking study recommended 0.75 spaces per unit, why is 0.50 being recommended as the interim requirement? Given the length of time that it has taken to make changes in the zoning by-law, how long will the new parking ratio of 0.50 spaces per unit remain in effect without an updated parking study?</p> <p>c. The Official Plan and Zoning By-Law for Williamsville Main Street makes it clear that the creation of new surface parking lots is not an allowed use. To facilitate construction and transition to a new Williamsville Main Street, the City passed a temporary use by-law (2015, renewed in 2018) to permit surface parking lots as a short-term</p>	<p>a. The proposed provisions related to parking allow for individual property owners to determine their residential parking needs within a range based on the specific context of the proposal and their anticipated demand. A property owner may provide a minimum of 0.4 and a maximum of 1 parking space per residential unit. No changes to existing non-residential parking rates are proposed at this time. The Official Plan will allow streamlined flexibility for further parking reductions, where they can be supported by a parking study completed by a qualified person. These further reductions will be reviewed by the Committee of Adjustment on a case-by-case basis.</p> <p>Reductions in minimum parking requirements are not only intended to provide flexibility and support development, but also, and more importantly, better align with Official Plan policies and Council priorities related to affordability, the climate emergency, and reducing the need for vehicles in parts of the city that are well located in mixed use areas as far as daily needs are concerned. Specifically, the City has set city-wide mode share targets to be achieved by 2034 for 15% transit usage, 20% active transportation and 65% automobile. The reduction of surface parking requirements in this central location</p>

Theme or Site-Specific Address	Questions and/or Comments	Response
	<p>use. Although new parking lots continue to be created, I have never seen a request for a change in use which would trigger a site plan to control the use and appearance. How is this possible? Why have staff not dealt with the new parking lots?</p>	<p>on an express transit route aligns with these Council goals.</p> <p>b. As noted in the Staff report, two key trends related to parking have been observed in parking supply proposals along the Williamsville Corridor in recent years. Many applications have requested a reduction in residential parking, with a ratio of 0.5 spaces per dwelling unit being the typical request. This request has been broadly supported by Staff and Council and is now generally perceived as the new parking standard by proponents. Staff have also encountered some applications proposing a high number of parking spaces, which are considered excessive given the Council priorities outlined in response a. above.</p> <p>The Williamsville Main Street represents a strategic location to require a consistent and predictable reduced number of residential parking spaces. Establishing a lower requirement for residential spaces in the Williamsville Main Street provides an opportunity to test a forward-thinking provision that will help to meet Official Plan policies and Council priorities. The rates proposed are based on experience with past applications and development in the corridor.</p> <p>A revised version of the mentioned Parking Standards Study will be the subject of a</p>

Theme or Site-Specific Address	Questions and/or Comments	Response
		<p>Discussion Paper presented to Planning Committee in early- to mid-2021, and feedback received from the public, key stakeholders and members of Council in response to the proposed standards will inform Staff's approach to parking in the second draft of the new zoning by-law. In the meantime, staff will observe and monitor the parking minimums and maximums in the Williamsville Corridor, and will advise Council if parking-related issues arise and in advance of the completion of the new zoning by-law, may bring adjustments to the parking approach if deemed necessary by staff or directed by Council.</p> <p>c. If there are surface parking areas that have been added in contravention of the by-law, this can be reviewed and enforced at a site level outside of the context of the Study update.</p>
8. Green Streets & Parkland	a. What does "a redesign of the existing side street cross-section" mean and why has this not been done in almost 8 years since Council unanimously approved the Williamsville Main Street Study? For years we have been asking how and when the green street concept is going to be implemented. It is disconcerting to learn that there is	a. A "street cross-section" is a common tool used in transportation planning which involves a visualization of the functional elements of a street to ensure their effective layout, and to determine what combination of elements can fit within a specific right of way width. A cross-section imagines looking at the entire width of the right-of-way straight on from a hypothetical vertical cut.

Theme or Site-Specific Address	Questions and/or Comments	Response
	<p>no plan and no schedule to develop a plan.</p> <p>b. Recently, three, 100-year old maple trees on the city boulevard were destroyed to build 501 Frontenac Street. Would it have been different if the Green Streets plan had been in place with the requirement for a three-metre setback (rather than less than a metre) and a site plan that met the requirements of the Green Streets cross-section? Is three metres enough? Where does the three-metre setback apply – just within the WMSS subject area or on either side of Princess Street for the length of Alfred, Frontenac, Albert and Nelson from the Memorial Centre to Victoria Park? The staff report for the WMSS review must indicate what is going to be done in terms of planning for Green Streets and when the plan will be in place.</p> <p>c. The Williamsville Main Street study envisioned transforming a neglected strip of Princess into a vibrant neighbourhood hub. The Planning Department’s Draft Addendum to the study turns that strip into a barren traffic corridor, with walls of tall</p>	<p>At present, the green street design elements for side streets have not been developed or implemented, and similar to the review of the right-of-way design for Princess Street, their incorporation requires redesign of the existing side street cross-sections to accommodate additional trees and other landscape elements. While landscaping treatments and trees are supported within the City’s transportation policies, these changes also need to be considered in the context of the needs of the transportation network, active transportation infrastructure, and the constraints associated with existing underground services. The scope of the transportation analysis does not include detailed design work for the north-south streets that cross Princess Street, however work on the Princess Street corridor in the next phase of the transportation study will inform the design for these intersections, and will identify how the north-south streets will function in the long-term transportation network. This will provide a basis to develop the conceptual approach for green streets in the future. Detailed design of the north-south streets that cross Princess Street, including those identified as future green streets, is not planned or funded at this time but would be scheduled pending future reconstruction work of the side streets.</p>

Theme or Site-Specific Address	Questions and/or Comments	Response
	<p>buildings unalleviated by greenery or parkettes, and minimal setbacks from the sidewalk. Williamsville already has the city’s lowest allocation of public green space per capita. The so-called “addendum” is in fact a complete betrayal of the study’s principles and of the neighbourhood’s residents.</p> <p>d. Without even one parkette having been built on Princess Street, the staff report states: “An over-supply of parkettes in the Williamsville Corridor may lead to their underuse” (Addendum, page 16). I don’t disagree, but why is this relevant. This statement is being made for a part of Princess Street that has undergone significant growth and is forecast to undergo even significantly more and in a district that already has the lowest per capita parkland in the municipality. Why has this statement been made? What criteria are staff using to determine when the Williamsville Main Street has an over-supply of parkettes?</p>	<p>b. The proposed amendments increase setbacks from what was required through the original Study for major roads and green streets. The intent is to allow for more space for pedestrians and other streetscape amenities such as vegetation, benches, etc. Additional work on the details of Princess Street corridor will be undertaken in the next phase of transportation work for the Williamsville Main Street. Refer to response item a. above for additional context on future phases of work for north-south streets.</p> <p>c. An increased minimum setback requirement of 3.0 metres is proposed on Princess Street to allow more space for the widened pedestrian realm recommended by the Study, as well as the street trees, benches, and active commercial frontages. Through recent development applications, small urban parkettes have been secured or are currently being negotiated along Princess Street at the northwest corner of Frontenac Street, the southwest corner of Nelson Street, the northwest corner of Alfred Street, and the northwest corner of Chatham Street.</p> <p>d. As described above, small urban parkettes have been secured or are currently being negotiated at a number of locations along Princess Street. The location of public open space should be strategic to ensure greater</p>



Theme or Site-Specific Address	Questions and/or Comments	Response
		<p>potential for a more functional open space that is distributed across the study area. Strategic placement of public open space also allows for effective planning of amenities, facilities, and maintenance works. Staff continue to identify opportunities to establish public open space in strategic locations across the study area as a requirement of development applications under the <i>Planning Act</i>.</p>
<p>9. Transportation &amp; Active Transportation</p>	<p>a. The Transportation Analysis presented by Dillon was all about measuring motor vehicle road capacity. There is a serious lack of recognition that the increased density and the nature of the growing student population in this part of Princess warrants a Complete Streets approach.</p> <p>b. How is walking distance defined?</p> <p>c. Request for additional information on the transportation report. Will the technical reports be part of the Public Meeting?</p> <p>d. I understand that there is more to come in the next phase of the transportation study, but I believe the full transportation report should be in place before any further development occurs.</p>	<p>a. The Transportation Analysis modelled the motor vehicle traffic along the Princess Street corridor under existing and proposed development conditions to confirm that no additional measures or capacity need to be considered for the transportation network and vehicular traffic anticipated through the corridor based on the developments that have been approved to date. This analysis did confirm that no additional measures or capacity need to be considered for the transportation network and vehicular traffic anticipated through the corridor based on the developments that have been approved to date.</p> <p>The analysis also considered the City's mode share targets and modal trends in the neighbourhood, noting high percentages of pedestrian movements and opportunities for further transit support through this corridor,</p>

Theme or Site-Specific Address	Questions and/or Comments	Response
	<p>e. Once the students return in the fall, there is a huge increase in deliveries of all kinds from pizzas to mattresses. How have these “vehicle trips” been the counted? There is no reason to believe they will decrease when students live in apartments.</p> <p>f. 10E.1.40. c. “Service and drop-off area circulation shall not interfere with accessible pedestrian circulation”: Since this happens now, how will it be enforced as the number of vehicles of all kinds increases?</p> <p>g. Why isn’t the growth at Queen’s south of Williamsville considered in the ‘employment calculations’ included in the transportation report?</p> <p>h. I can only hope that adequate space for waiting passengers has been planned for as the population is expected to triple the original WMSS plan. I also think some of the bus stops should be moved following the guidelines in the Transportation Assessment, WMSS. 2012.</p> <p>i. With regards to the active transportation going north and south, how will the safety of those crossing Princess Street be dealt with? In the original WMSS several problem</p>	<p>which align with City’s mode share priorities. The analysis identified that work should continue to promote and support the modal shift to transit and active transportation modes to support the City’s mode share targets, with a focus on pedestrian and transit priority opportunities along the corridor.</p> <p>The next steps for the transportation work for the Williamsville Main Street Corridor following this Addendum are to review and identify the preferred role, function and resulting updated cross-section for Princess Street, including more detailed study of the Princess Street intersections to ensure that pedestrian and transit priority is incorporated along the corridor.</p> <p>b. The Official Plan specifies that 600 metres is walking distance. Kingston Transit uses 300-400 metres for local transit stop access and 800-1200 metres for express transit access.</p> <p>c. The Transportation Report was part of the Public Meeting, with staff from Transportation Services available to respond to questions.</p> <p>d. The focus of the current work for the Williamsville Main Street is to address the components of the Interim Control By-Law (ICBL) passed by Council – specifically the location of taller buildings and the use of the angular plane and other provisions to control built form. The amendments to be considered</p>

Theme or Site-Specific Address	Questions and/or Comments	Response
	<p>corners, including Frontenac and Princess, were identified as having 'inadequate day light corners' and I have seen no modifications of these to date.</p> <p>j. How has pedestrian accommodation been considered in developments to date and how will it be rectified in the future? The width of the current sidewalk with the additional one metre set back is completely inadequate. Staff recognize this in the addendum and yet construction continues. Why have modifications not been made to proposed developed before it is too late?</p>	<p>by Council will increase setbacks for new development. This allows for more flexibility when determining the future cross-section for the corridor. The proposed amendments to the Official Plan and zoning by-law in this location are moving ahead of the detailed design of the corridor right of way, while considering the goals of the Williamsville Main Street Study.</p> <p>The next phase of the transportation analysis, slated to continue after adoption of the Study addendum and associated policy amendments, will identify the preferred role, function and resulting updated cross-section for Princess Street. This expanded study will include additional public consultation and transportation modelling to refine the recommended design of the right-of-way for Princess Street, including intersections and crossings.</p> <p>e. Delivery vehicles have not been specifically studied but have been considered in the transportation modelling that was completed for vehicular trips through the Princess Street corridor, and to destinations within the neighbourhood. Please refer to response a. above for details regarding the next steps in the transportation work for the Williamsville Corridor.</p>

Theme or Site-Specific Address	Questions and/or Comments	Response
		<p>f. On-site servicing and loading will continue to be required in accordance with the standards of the zoning by-law. Functionality of these loading spaces, as well as their interaction with pedestrian access routes, are reviewed by the City on each site in its specific context through the Site Plan Control process.</p> <p>g. The population and employment growth for the Transportation Analysis were considered in two ways: growth throughout the City, which forms part of the main City-wide transportation model, as well as specific growth within the Williamsville corridor. The growth within the Williamsville corridor was modelled in combination with the City-wide population and employment growth that is also applied to the corridor through the City-wide model.</p> <p>h. Please refer to staff's response to question a. above for details regarding the next for transportation work for the Williamsville corridor. This work will review and identify opportunities within the future cross section for Princess Street with a consideration for transit priority elements along the corridor. Transit stops will continue to be located based on transit operations for and through the area, as well as considering opportunities within the corridor to integrate transit stops within elements of the expanded pedestrian realm</p>

Theme or Site-Specific Address	Questions and/or Comments	Response
		<p>through new construction of properties and reconstruction along the corridor.</p> <p>i. As noted above, the intersections along the Princess Street corridor will be reviewed in the next phase of the transportation work for this corridor. This will include reviewing the cross-section for Princess Street with a focus on transit and pedestrian priorities, as well as concepts for intersection configurations including active transportation connections north-south across Princess Street. This work will consider the constraints with existing property lines, spatial requirements for the road design and pedestrian crossing elements. The work may include iterations of removing turning lanes at select intersections for the ultimate proposed configuration for this corridor. It should be noted that this work will identify an updated cross-section for the Princess Street corridor, however detailed design and construction of improvements to the intersections along this corridor are subject to future funding opportunities. Currently, the timing for this work is not known along the full corridor, with the exception of the area between Alfred to Division Streets, for which funding has been allocated for reconstruction beginning in 2022. The design for this section will be informed by the next steps of the transportation work.</p>

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		<p>j. Amendments to the Official Plan and Zoning By-Law cannot be applied retroactively to developments already approved under the previous policies and zoning, in accordance with the <i>Planning Act</i>. The current proposed Zoning By-Law Amendment includes a transition clause that further confirms this legal requirement. Development proposals that are submitted after amendments to the zoning by-law are adopted would be subject to the new provisions, including the increased minimum setback requirements from front and exterior lot lines.</p>
<p>10. Protection of Adjacent Residential Uses</p>	<p>a. At the very least there should be a stepback above the third storey where buildings abut residential zones. Part of it can be further mitigated by eliminating balconies and roof-top patios on buildings that overlook low-rise residential.</p> <p>b. I have heard numerous times that the reason for an updated OP and Zoning By-Law was to provide certainty as to what could be done. How do phrases such as “at the City’s discretion” provide any degree of certainty at all? Doesn’t this approach just continue with what staff report has identified as “complex and difficult to understand procedures”?</p>	<p>a. A minimum eight-metre setback is required from the rear lot line, which has been more clearly defined in the zoning by-law amendment and includes properties that abut a residential zone. This eight-metre setback provides a distance buffer which serves to reasonably mitigate concerns related to intrusive overlook, understanding the urban context of the area. On-site amenity area is an important consideration of multi-residential buildings and is required to be provided by the zoning by-law. Balconies and roof-top patios are potential ways to satisfy this requirement and provide attractive amenity space for users. The proposed zoning by-law limits the permitted depth of a projecting balcony above the first floor to 2 metres (1.5 metres at the street), to ensure that a balcony is no closer</p>

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	<p>c. What is meant by moving toward a “reduced focus on potential perceived impact to individual dwellings and more emphasis on/support for broader public interest goals”? It appears that instead of “broader public interest goals” the changes in the setback, at least in this instance, will increase the options and opportunity for the developer to increase the value of the land rather than protecting “attractive, predominantly low-rise residential character”.</p>	<p>than 6 metres to a low-rise residential lot. The design and location of any proposed rooftop patios will be further regulated through site plan control to ensure potential spaces are functional and limit impacts on adjacent properties.</p> <p>b. The intent behind the amendments is to provide more certainty than what exists through the existing policies and zoning provisions. However, even with these changes, the City will still receive site-specific applications that will need to be evaluated. Some will be for the details reviewed through site plan control, while others may propose changes to the zoning framework. The planning process requires a degree of critical thinking and discretion for making recommendations about project-specific proposals.</p> <p>c. The Williamsville Main Street is identified as the City’s main “Corridor” in the Official Plan, which targets this as a location for future intensification. The proposed changes to the zoning provisions and Official Plan policies are needed to ensure that buildings taller than six storeys are in the right location, and that the built form of the main street supports pedestrian activity and an attractive streetscape. The revised policies seek to mitigate negative impacts on adjacent</p>



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		<p>properties, but without preventing the intensification that is planned for the corridor. Staff are seeking to clarify that some impacts and change are reasonable and to be expected in this situation.</p>
11. Heritage	<p>Provide consideration for heritage impacts on the development of the Williamsville Main Street Area.</p>	<p>Several properties along the Williamsville Main Street have already be designated under the <i>Ontario Heritage Act</i> since the original Study was completed. Staff are undertaking additional work in partnership with the Heritage Properties Working Group to evaluate the heritage potential of other properties on the side streets and periphery of the main street area.</p>
12. Other Zoning Performance Standards	<p>a. Why an eight-metre rear yard setback?</p> <p>b. Does amenity area include common spaces and living rooms in units?</p> <p>c. In the current state, the Williamsville streetscape is quite unpleasant. The new buildings have pushed blank concrete walls to the edge of the street leaving little space for pedestrians between the line of cars and the concrete brick. Please consider streetscape, wider sidewalks and ground floor 'street facing' commercial in the future development requirements.</p>	<p>a. The eight-metre minimum rear yard provides a physical separation between abutting low or medium-density residential uses. The eight-metre width also allows for effective functional or amenity uses to be provided at-grade.</p> <p>b. Indoor living rooms are not included in amenity area calculations, although Zoning By-Law Number 8499 has a requirement for a private amenity area, like a living room, which was put in place as a result of living area conversions to bedrooms in the near-campus area.</p> <p>c. This update includes increased setbacks to provide more space for pedestrians, street furniture, trees, etc. Ground floor commercial uses are required where indicated on</p>

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		Schedule PS-1. Many of the new approved developments that haven't yet been built include ground floor commercial spaces.
13. Economic Feasibility Report	<p>a. The scenarios considered only proposed rental buildings with many small units. The developers of the existing buildings in Williamsville are quite up front with their intention of marketing them towards absentee investors and student occupants. These are in effect private student residences...Why is a promising main street being changed into a student residence? This conflicts as the student rental occupants don't want "Corridor" traffic nor transit adjacent. This is changing the main street into a hotel district for tenants on 1 and 2 year leases and would displace long term residents and commercial development.</p> <p>b. The cost to developers of construction, and development fees was frequently raised as a justification for adding more residential units to the structure (developers haven't proven this is actually the case). What seems to be missing in the plans to resolve the feasibility/cost issues is the City's contribution to the cost. Building code,</p>	<p>a. The City is unable to control the marketing and tenure of residential units. Human rights legislation directs municipalities to be non-discriminatory in their approach to the users of land and focus controls on buildings and land uses. The goal of this update is to ensure that the built form of new development supports the main street character of the area for all existing and future residents, offering a variety of housing options, access to transit and opportunities for active modes of transportation, and access to local goods and services. Planning services requires a mix of unit sizes and configurations in order to support a variety of housing needs.</p> <p>b. Costs associated with provincial regulations are outside the control of the City. Part of the reason for this update to the Study is to provide clarity on the expectations of what is permitted. Projects developed in accordance with the revised zoning will be able to proceed to construction with fewer approvals and studies needed, thereby reducing costs. The staff report acknowledges the challenges associated with not be able to take advantage of inclusionary zoning because of the current provincial regulations. The update to the</p>

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	<p>labour requirements, regulations, and development approval policies are a large issue in restricting capital development and the City can reduce these consequential costs across the city at will. Some lobbying for provincial regulations would also be needed. Please consider adding regulatory reform to the recommendation to council recommendations. I would not be surprised if the planning consultants on the project would have a list of regulations that are costly and impeding developer progress.</p> <p>c. From the Watson report (dated May 6, 2020) on bottom of page 3, footnote 1: the cost of development, operating costs and revenue streams are based on data derived from developments of similar typology within the local market, could you share this information, explaining how you extrapolated the data?</p> <p>d. At the top of page 4, “Market Rent Assumptions for Purpose-Built Residential Units By Size” It says the source is based on local data by Watson &amp; Associates. Where, and how was this information obtained?</p>	<p>Study undertaken as part of the Interim Control By-Law had very specific parameters of what was to be reviewed and amended. It is therefore outside the scope of this update to review and recommend changes to various pieces of provincial legislation, but this is something that Planning Services monitors and provides comment and feedback whenever requested or required.</p> <p>c. (1) The cost of development for the pre-cast concrete scenario was derived from 2019 RSMeans (Square Foot Costs with RSMeans data, 2019, 47<sup>th</sup> Annual Edition, Gordian Group Inc.) with cost of construction data on a square foot basis based on the Williamsville development parameters. This included consideration of floorplate, gross floor area by building use, number of storeys and build quality. A location factor as provided by 2019 RSMeans was applied to represent costs for the Kington market. An estimate of equivalent wood construction cost was derived directly from this approach, with a downward adjustment applied to derive the cost of wood frame construction based on typical cost difference generally observed in Ontario between pre-cast and wood construction. (2) The operating cost was calculated as a percentage of gross potential rent and is based on National Apartment Association 2018 Survey of Operating Income and</p>

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	<p>e. Why were market rents assumed to appreciate by 2 percent annually over the course of the 25 year cash flow period?</p> <p>f. Why do we talk about Retail and Office space, but only use the Retail rents in our Cash Flow Analysis and Return on Investment?</p> <p>g. Why is the Proforma not including parking for the Retail and Office Space?</p> <p>h. Given the large increases in lumber prices this year how has this affected your total development costs, analysis?</p>	<p>Expenses in Rental Apartment Communities, adjusted to reflect operating cost based on number units in proposed development and age of building over the cash-flow period (25 years). (3) Residential market rents are based on a desktop review of market rents in Carruthers Wharf and Locomotive Works developments in Kingston. Rents were analyzed in these developments on a dollar per square foot basis and were used to generate per unit rents by size class identified in the Williamsville development. Retail (non-residential) market rents are based on premium at-grade, on-street lease rates observed in Downtown Kingston along the Princess St. Corridor.</p> <p>d. See response to sub-section c. above.</p> <p>e. The 2 percent annual appreciation in market rents is based on historical rent increase guideline data from the Government of Ontario. Over the 2000 to 2020 period the average annual rent increase was 2.13 percent, however, the annual increase has decreased slightly over the period. As such, a 2 percent average annual increase was considered an appropriate rate for the 25-year period. It should also be noted that Watson acknowledges that market rent increases are subject to changes in policy and market conditions, such as the rent freeze for 2021,</p>

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		<p>but the long-term trend is expected to be similar to historical trends.</p> <p>f. Based on market considerations, it is anticipated that the at-grade commercial component of the development will be oriented to meeting local population needs – i.e. small-scale retail, personal services, restaurants/cafes with more limited potential for office development. As such, the pro forma revenue stream is based on retail commercial revenues.</p> <p>g. Given that the retail commercial space is oriented to meeting local population serving needs (see response to sub-section f. above), the pro forma did not consider a provision for on-site parking for the non-residential component. Any required parking was assumed to be accommodated through on-street parking.</p> <p>h. Our pro forma analysis was prepared prior to the full onset of the COVID-19 pandemic with our input assumptions based on available data in winter/spring 2020. Recent increases in lumber prices due to the COVID-19 pandemic are not reflected in our pro forma analysis.</p>
14. Other Policy Project Updates	a. Request for an update on the completion of Density by Design. Will the design guidelines from	a. This work represents one phase of the Density by Design project, which is being completed in a phased, area-specific approach. While some aspects of the current

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	<p>Williamsville be carried over to other parts of the City?</p> <p>b. Request for an update on the timing of the North King’s Town Secondary Plan.</p> <p>c. We’ve been spending a lot of time on Williamsville and have not focused on other areas. Developers are waiting for information.</p>	<p>recommendations may translate into other areas of the City, other components will not. The next phase of Density by Design will be in June 2021 and will focus on the downtown core/Central Business District.</p> <p>b. Based on a recent <a href="#">Council report</a>, the work for North King’s Town Secondary Plan has been pushed out to 2022 due to staff resources and impacts from changes in service delivery due to the COVID-19 pandemic.</p> <p>c. Once the work on Williamsville is complete, staff will be focusing on the Density by Design project and the Central Kingston Growth Strategy, while continuing to support the comprehensive zoning bylaw update. It is important to note that the timing and resources associated with the update to the Williamsville Main Street Study has been directly related to the Interim Control By-Law (ICBL). The work undertaken in response to the ICBL must be completed under a strict and defined timeline, and there are prohibitions on new development applications while the ICBL is in place.</p>
15. Other Comments / Questions	a. The Utilities Kingston memo is not easy to understand. Will each property owner still have to do studies to determine if their development can be serviced?	a. Yes, a servicing report and plan will continue to be required for individual property development to confirm that adequate servicing is available to meet the needs of that development.

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	<p>b. What if people who own the land do not want to build what is outlined in the study? Is that a waste of money on the study?</p> <p>c. The City is about to update to the Williamsville Main Street Plan that will potentially stop in its tracks all the good transformation of this part of the City. Why, because a few activists and nimby's make more noise than the rest of us? They want to limit height and therefore take away the best architectural possibilities. They want to limit side street development and therefore limit new housing possibilities in a market that desperately needs more supply. Is the talk of more housing by Council, just that, talk?</p> <p>d. At the Planning Committee meeting where the draft was presented, the planners consistently referred to "The Corridor", indicating their view of Williamsville as a traffic pass-through, rather than as one of the city's oldest neighbourhoods. At the February 12 meeting where planners sought public input on the current direction of Princess Street development, they acknowledged a community lack of</p>	<p>b. The Williamsville Main Street Study represents a long-term (25 year) vision for the corridor based on public consultation and good planning principles. City staff do not have the ability to compel development of private lands. Having a good planning policy framework in place ensures that, when property owners do wish to redevelop their lands, those developments represent positive contributions towards the long-term vision for the corridor. The policy direction also helps to guide investments made by the City in the area (e.g., road improvements, transit planning, public spaces) and ensure these also align with the long-term vision established in the Plan.</p> <p>c. The update to the Williamsville Main Street policies and zoning provisions are intended to continue to support residential development within the study area, while reflecting the community desire for mid-rise development. The proposed amendments continue to support a six-storey corridor and allow for additional height at the Princess and Division Streets intersection and eventually at the northwest end of the study area. Where the previous iteration of the study contemplated a six-storey corridor with several 10 storey buildings, the vision in the amendment contemplates a six-storey corridor while recognizing those 10 storey buildings already</p>



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	<p>trust in the Planning Department. They reiterated this in the addendum, yet it totally ignores concerns raised by the community.</p> <p>e. The addendum proposes adding housing for 7,000-8,000 additional people. The Transportation Study puts that figure at 12,000+. Kingston Utilities says they can provide the requisite infrastructure. But where is there provision for the other services all these people will require? Where are the schools? the fire and ambulance stations? the parks? the community centres and swimming pools? (Artillery Park is already at or beyond capacity.) Why are developers not being required to fund and build these essential services? And where will they be built?</p> <p>f. Why does the Planning Department feel compelled as one its objectives to make changes to ensure that the new conditions are “favourable for private market development”? If the City can achieve its goals under the current OP and zoning by-laws, why are changes being made that “provide mitigation for transitions to adjacent residential neighbourhoods, but with a reduced</p>	<p>approved and allowing for limited additional 20 storey buildings only at the end of the Main Street. The podium/tower building form required for tall buildings through the updated policies represents a more modern form than previously contemplated.</p> <p>d. We apologize for this misunderstanding! When staff spoke about the Corridor, they were speaking specifically about the section of Princess Street that runs through the Williamsville neighbourhood, which is the area that these policies apply to. The term “corridor” is part of the language of the Official Plan and a land use planning term. The Williamsville neighbourhood includes much more than just Princess Street, as is reflected in the discussions in the Addendum that differentiate between the policy areas that intend change (Corridor) and that do not (identified as ‘stable neighbourhoods’ in the Official Plan). Other neighbourhoods that surround and abut the Williamsville corridor of Princess Street are also discussed (Sunnyside and Queen’s). “Corridors” are also identified in the Official Plan as locations for future intensification.</p> <p>e. The City’s Planning Services department recognizes the impact that new and increased development has on service levels in neighbourhoods, and are actively involved in</p>

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	<p>focus on potential perceived impact to individual dwellings and more emphasis on/support for broader public interest goals.” I read this as saying that the Williamsville Main Street plan has been successful but changes are going to be made to make it easier for developers but there will be an impact on individual dwellings. Is this correct?</p> <p>g. Why isn't there any indication about how inclusionary zoning could be incorporated into the proposed changes to the WMSS? Or why inclusionary zoning is not being considered?</p> <p>h. Why aren't there some diagrams or images to illustrate the proposed changes? For example, there should be a diagram comparing what is in effect now to protect low-rise residential with what is being proposed.</p>	<p>working with, and providing information to, the other departments and agencies that are responsible for the provision of other important community services, including emergency services, parks and recreation, etc.</p> <p>f. Thank you for this question that has helped us to clarify this point. The reason for ensuring reasonable financial viability is to support redevelopment in the short term, while ensuring good land use planning and public interest outcomes. Staff are also seeking to clarify that intensification and redevelopment will bring change and that some level of impact on adjacent land uses is reasonable to expect for the City's main corridor for growth.</p> <p>g. In 2019, the Province passed changes to the <i>Planning Act</i> related to Inclusionary Zoning in the <i>More Homes, More Choice Act</i> in 2019. The changes have a significant impact on Inclusionary Zoning in Kingston, as the changes restrict the application of this affordable housing tool only to those municipalities that are prescribed by the Minister of Municipal Affairs and Housing, or those municipalities who can scope the application of Inclusionary Zoning policies to areas within a protected major transit station area or a community planning permit system. At this time, Kingston does not meet any of</p>

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		<p>the criteria required by the <i>Planning Act</i>, since there are currently no municipalities prescribed by the Minister and it does not have a protected major transit station or a community planning permit system as defined by the <i>Planning Act</i>.</p> <p>h. Additional images have been included with the revised Addendum.</p>
<p>16. 641-647 Princess Street, 577 Victoria Street, &amp; 236 Nelson Street</p>	<p>a. We request that 236 Nelson Street (St. Luke’s Church) be included within the Williamsville Main Street Area, including the implementing Official Plan and zoning by-law amendments.</p> <p>b. We request that the subject lands be recognized as an appropriate location for increased height and density.</p> <p>c. Should the site not be recognized as a taller building site, we request that criteria for the establishment of taller building sites between the Williamsville Gateways be provided to ensure that the housing goals underlying the WMSS can continue to be met.</p>	<p>a. The property at 236 Nelson Street is currently designated Residential, is within a residential zone, and is of a sufficient size to allow for a redevelopment of the site to occur. Staff are of the opinion that including the property in the Williamsville Main Street area is unnecessary for the redevelopment of the property. If a proposed redevelopment of the site does not meet the current Official Plan designation and policies, then a site-specific amendment should be sought, to allow for the appropriate public review and consultation process to take place.</p> <p>b. Staff are recommending that a height map, as shown in the schedules attached to Exhibits A and B and described in the staff report, be used to determine where additional height is permitted in the study area, rather than the conditional criteria that was available in the past.</p> <p>c. As learned through the original policies, a criteria-based approach can result in</p>

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		<p>unintended outcomes and has ultimately resulted in the Interim Control By-Law we are now working to address. A height map is considered the clearest way to ensure that the intent of the policy, and the understanding of the public, is implemented through future developments.</p>
<p>17. 572-574 Princess Street &amp; 464 Frontenac Street</p>	<p>a. Request that 572-574 Princess Street and 464 Frontenac Street be recognized as an appropriate location for increased height and density and be included in the Official Plan amendment and zoning by-law amendment, subject to further consultation with our office and the landowners.</p> <p>b. One further point we would like to make relates to the redevelopment of the site. First reiterating that with this being a single property, all the buildings operating as an integral part of site. For example, they share parking, amenity and landscaped areas. 464 Frontenac cannot be stripped out of the site. While we did not expect a disastrous event to occur on the property, if one were to occur the owners would redevelop the site in a comprehensive way, considering a</p>	<p>a. Staff are recommending that a height map, as shown in the schedules attached to Exhibits A and B and described in the staff report, be used to determine where additional height is permitted in the corridor. As learned through the original policies, a criteria-based approach can result in unintended outcomes and has ultimately resulted in the Interim Control By-Law we are now working to address. A height map is considered the clearest way to ensure that the intent of the policy, and the understanding of the public, is implemented through future developments.</p> <p>b. Through a rationalization of the Williamsville Main Street area boundary that has been conducted, staff are recommending that 464 Frontenac Street should be redesignated as Main Street Commercial in the Official Plan as it is part of the larger parcel of land at 572-574 Princess Street and because it is commercially zoned.</p>

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	<p>new layout that would see buildings fronting onto all of the streets.</p>	
<p>18.490-500 Princess Street</p>	<p>a. Request that 490-500 Princess Street be considered as a taller building site and that criteria for taller building sites throughout the corridor be established to provide greater clarity, with the guidance deriving from the economic analysis provided by Watson and Associates.</p> <p>b. The subject site is located within the Gateway Character Area, which the WMSS identifies as an area for redevelopment and an appropriate context to accommodate buildings up to ten storeys. Due to recent investments in the subject property, the economic viability of redeveloping the site is highly dependent on the potential unit yield and, therefore, building height. Should the redevelopment potential be limited to six storeys, it would not be economically viable to redevelop them within the life of the updated WMSS.</p> <p>c. If the maximum height of six storeys is based on achieving a planned unit count, the housing targets may not be achievable as envisioned, which would require site-specific amendments to</p>	<p>a. Staff are recommending that a height map, as shown in the schedules attached to Exhibits A and B and described in the staff report, be used to determine where additional height is permitted in the corridor. As learned through the original policies, a criteria-based approach can result in unintended outcomes and has ultimately resulted in the Interim Control By-Law we are now working to address. A height map is considered the clearest way to ensure that the intent of the policy, and the understanding of the public, is implemented through future developments.</p> <p>b. See the response to sub-section a. above.</p> <p>c. The Williamsville Main Street Study represents a long-term (25 year) vision for the corridor based on public consultation and good planning principles. Staff have no means of compelling development of private lands. Having a good planning policy framework in place ensures that, when property owners do wish to redevelop their lands, those developments represent positive contributions towards the long-term vision for the corridor. The policy direction also helps to guide investments made by the City in the area (e.g., road improvements, transit planning, public spaces) and ensure these also align</p>

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	<p>the Official Plan to accommodate the greater height needed to absorb the required number of units. As such, we recommend that the updated policy documents continue to describe parameters for the development of taller buildings in Williamsville in a site-specific and sensitive context to ensure that the housing goals for the Williamsville Main Street can still be achieved. Consideration should be given to allowing unused height and density from certain sites to be utilized by other sites to allow greater building height.</p>	<p>with the long-term vision established in the Study. While achieving additional residential units is a goal of the Study, including affordable units, it is not expected that all of the development potential within the main street will be realized in the short-term.</p>
<p>19.544-556 Princess Street &amp; 336 Alfred Street</p>	<p>Request that 544-556 Princess Street and 336 Alfred Street be recognized as an appropriate location for increased height and density and/or that the study be revised to provide criteria to allow for taller building heights in the Williamsville corridor.</p>	<p>Staff are recommending that a height map, as shown in the schedules attached to Exhibits A and B and described in the staff report, be used to determine where additional height is permitted in the corridor. As learned through the original policies, a criteria-based approach can result in unintended outcomes and has ultimately resulted in the Interim Control By-Law we are now working to address. A height map is considered the clearest way to ensure that the intent of the policy, and the understanding of the public, is implemented through future developments.</p>
<p>20.170 Colborne Street</p>	<p>a. We applaud the approach of pre-designating 170 Colborne Street as a site for increased height and support</p>	<p>a. Like the other properties near the Princess Street and Division Street intersection, staff are recommending that this site be re-zoned</p>

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	<p>its inclusion in the height map provided with the draft Official Plan Amendment as a location where a maximum height of 14 storeys is appropriate. We request that this property continue to be recognized as a site suitable for a 14-storey building in subsequent iterations of the draft policy framework. Further, we request that 170 Colborne Street be included in the zoning by-law amendment and that an appropriate C4-H(T1) zone be applied to the lands, subject to further consultation with our office and the landowner.</p> <p>b. We also provide the following comments on the proposed performance for taller buildings as expressed in the draft OPA and zoning by-law amendment. The proposed 60-metre building height maximum would not quite be sufficient to allow a 20-storey height with a 4.5 metre ground floor height and rooftop mechanical. We recommend that the maximum height in metres be increased appropriately and that greater flexibility be provided for any features that may need to exceed the maximum building height.</p>	<p>to C4 to be in line with the existing Main Street Commercial designation.</p> <p>b. Staff have increased the maximum height to 61.5 metres and have carried forward the existing provision in the zoning by-law that allows for additional height for mechanical penthouses and other rooftop mechanical equipment.</p> <p>c. The height mapping in the revised addendum is reflected in both the Official Plan and the zoning.</p> <p>d. Additional details and provisions have been added to the revised zoning for the treatment of towers in locations that permit buildings taller than six storeys.</p>



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	<p>c. We ask that the permitted location of tall buildings be clarified in the zoning by-law amendment. While a general area is noted on draft Schedule PS-1, Princess Street Corridor Specific Policy Area Williamsville Main Street for the location of 60 metre building heights, greater clarity is recommended.</p> <p>d. We ask that consideration for the 25-metre separation between residential towers which is included in the Official Plan amendment but not the zoning by-law amendment be further defined. It is unclear how this requirement will be applied to ensure that development on one property does not unfairly constrain development on an adjacent property.</p>	
21.429 & 445 Princess Street	<p>a. We and our client have reviewed the proposed policies for Williamsville Main Street Study Area. Our initial review is positive, and the owners are satisfied with the proposed policies for 429 and 445 Princess St. We will continue to review and provide comments as necessary.</p> <p>b. We request that staff's recommendation to include a temporary reduction to the residential</p>	<p>a. Acknowledged</p> <p>b. As detailed in the staff report and Addendum, staff are recommending that the Williamsville Main Street be used as a test/pilot area for a different approach to parking. There would be no parking minimum for either residential or non-residential developments, and a parking maximum of one space per unit for residential developments and no parking maximum for non-residential developments. Given that staff do not anticipate that many projects will take</p>

Theme or Site-Specific Address	Questions and/or Comments	Response
	<p>parking ratio in Williamsville to 0.5 parking spaces per dwelling unit be included in the Zoning By-Law amendment and that the parking ratio of 0.5 parking spaces per dwelling unit apply to all areas of the study area, not just areas where the height of buildings is limited to 6 storeys. The inclusion of a reduced residential parking ratio would facilitate the efficient development of the subject lands and corridor, while supporting the goals and objectives of the Williamsville Main Street Study and Official Plan.</p> <p>c. We request that staff consider including a temporary parking reduction for commercial parking within Williamsville to 1 parking space per 150 sq. m of gross leasable area for any permitted commercial use, and include a temporary loading space reduction within Williamsville to 1 Loading Space. This parking ratio has been approved on other sites in the area (e.g. 652 Princess St. and 495 Princess St.) and is consistent with modern development standards.</p> <p>d. We request that the City consider reducing the required setback from</p>	<p>full advantage of the zero parking minimum (most are expected to provide some level of parking between 0.5 and 1 parking space per unit, while there may be some who will be interested in experimenting in a zero parking building), and further given the opportunities for walking, biking and public transit-riding that exist in the corridor, staff do not expect local parking issues or problems to arise in the context of either individual or cumulative projects. However, as part of the pilot/trial, staff will observe and monitor the situation and will advise Council if parking-related issues arise, and if necessary in advance of the completion of the new city-wide parking by-law, may bring adjustments to the parking approach if deemed necessary by staff or directed by Council.</p> <p>c. See response to sub-section b. above.</p> <p>d. The revised setbacks are intended to maximize a positive pedestrian experience at the ground level and to provide room for key elements of the public realm, such as street trees, street furniture, etc. If a specific site or project requires a variance from those provisions, then they will be required to seek planning approvals through the appropriate public application process, so that the site-specific requirements can be adequately reviewed.</p>

Theme or Site-Specific Address	Questions and/or Comments	Response
	<p>Princess or Division Street to less than three metres to accommodate site specific design considerations for the corner lot. We note that the redevelopment of the subject lands could include allowances for an enhanced pedestrian realm in the form of a landscaped plaza at the intersection of Princess and Division that could accommodate a wider sidewalk and various street furniture elements. Alternatively, we suggest including allowances for articulation within the setback and clarification as to whether the City would consider site specific amendments to the setback requirements at the time of development.</p> <p>e. We request that staff revise the Draft OPA and ZBA to ensure that the requirement for Ground Floor Height is consistent (i.e. either floor-to-floor height or floor to ceiling height).</p>	<p>e. The revisions to the Addendum have clarified that the first/ground floor height is intended to be measured from floor to floor.</p>
22.556 Princess Street	<p>A paved parking lot has been established at 556 Princess Street. What kind of permit allowed this to happen? How will this be prevented in the future? We need affordable housing, which was previously established on this site, and parkettes, which this site could have become.</p>	<p>If there are surface parking areas that have been added in contravention of the by-law, this can be reviewed and enforced at a site level outside of the context of the Study update.</p>



**Addendum to the Williamsville Main Street Study**

November 5, 2020

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# Addendum to the Williamsville Main Street Study

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## 1.0 Introduction

This addendum has been prepared in response to Council's direction regarding an Interim Control By-Law (By-Law Number 2019-73) and a review of the Williamsville Main Street Study (2012). It will support changes to the related Official Plan policies and zoning by-law provisions. Where there is a discrepancy between the Williamsville Main Street Study (2012) and this addendum, the material presented in the addendum will take precedence.

## 2.0 Background

In 2012, the [Williamsville Main Street Study](#) (the Study) was completed and approved by Council. The study area, known as the Williamsville Main Street, is a 1.7 kilometre stretch of Princess Street from Division Street to the Bath Road and Concession Street intersection.

The goal of the Study was to spur development along a main street that is increasingly becoming pedestrian-oriented and transit-supportive with mixed use developments, and commercial uses to serve the surrounding neighbourhoods. The City implemented the Study in Official Plan and zoning by-law amendments in 2013, which created the "Princess Street Corridor Specific Policy Area, Williamsville Main Street" (Section 10E.1 and Schedule PS-1) in the Official Plan ([www.cityofkingston.ca/official-plan](http://www.cityofkingston.ca/official-plan)) and the C4 zone in Zoning By-Law Number 8499 for the majority of the lands within the study area.

### 2.1 Four Definitions of Success for this Work Program

Staff identified four definitions of success for assessing options and are outlining them here to provide context to the recommendations. They include consideration of history and original intent; more recent Council priorities and direction; operational and process-related challenges; and the broader aspirations for strategic and timely infill development in the city in keeping with recent new thinking as part of the Density by Design exercise. These definitions are supported by new information and analysis to result in the recommendations presented in this addendum.

The following four "definitions of success" were identified and utilized:

- 1) Respect for, and a wish to get closer in implementation to, the "original vision/intent" of the Williamsville Study where still applicable/appropriate;
- 2) Respect for, and a wish to reflect new needs and aspirations that have arisen in the city, and more recent or current Council direction;

- 3) A need for a clear, understandable system that is easy to implement/operate; and,
- 4) An approach that allows many/most individual projects to be viable under reasonable assumptions, with enough projects "green lit" (i.e. allowing development to proceed easily) in the short to medium term to address strategic smart growth goals in this key urban corridor.

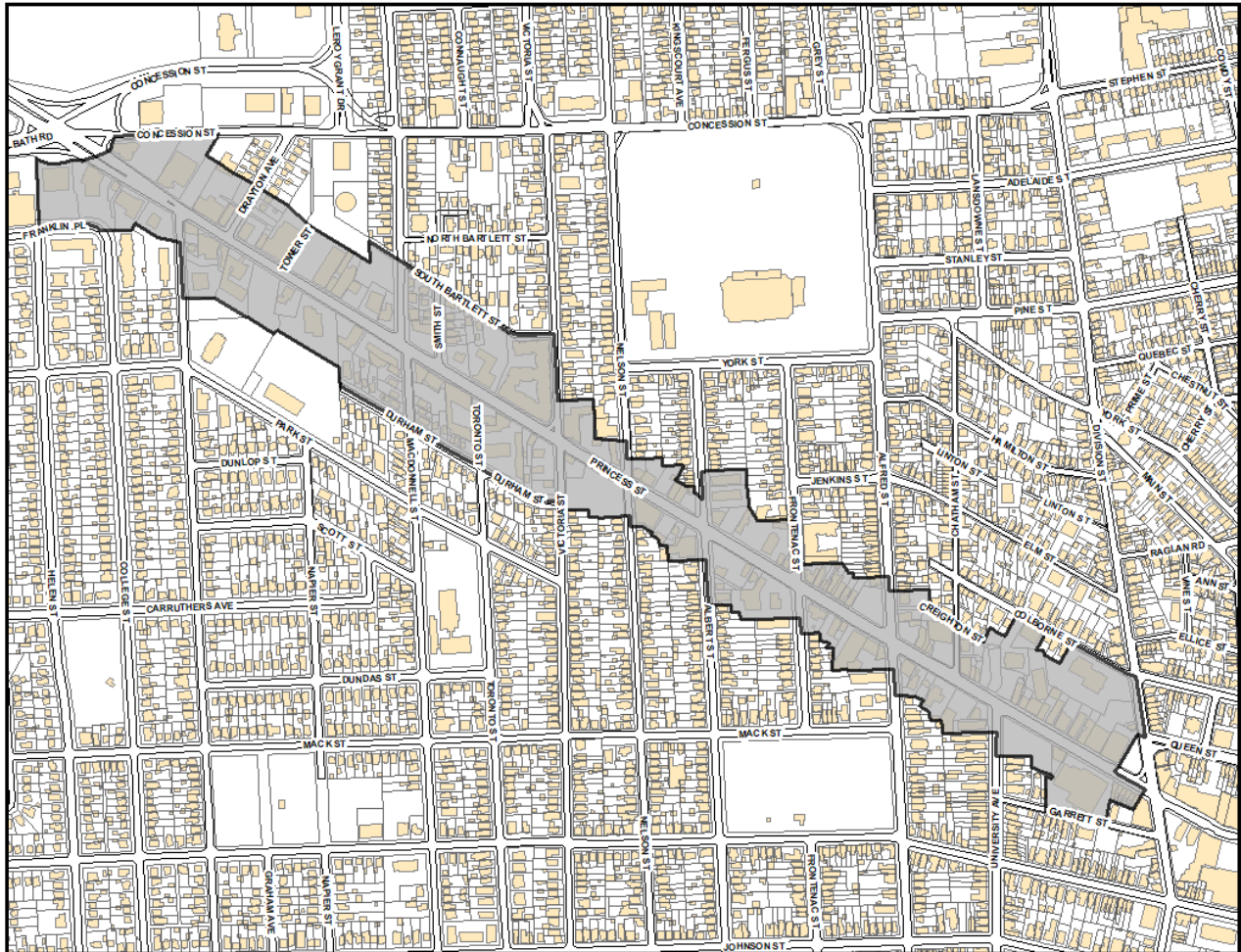


Figure 1: Existing Williamsville Main Street Corridor

### **3.0 Putting Williamsville in Context**

#### **3.1 City-wide Growth Considerations**

In 2019, the City updated its [Population, Housing & Employment Projections](#) to estimate growth in Kingston from 2016 to 2046. This work shows that the City continues to grow at a steady pace, creating additional demand for housing and jobs as time goes on.

Employment trends indicate that Kingston, similar to provincial and national trends, is transitioning from goods to services production. The fastest growing sectors in Kingston are knowledge-based ones, including health care and social assistance, educational

## **Addendum to the Williamsville Main Street Study (November 5, 2020)**

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services, and professional, technical and scientific sectors. The employment base also has a high concentration of people engaged in arts and culture, as well as being oriented highly towards small businesses and home-based occupations.

In terms of population and housing trends, while the permanent population in the City continues to grow at a modest pace, the City's student population is growing considerably faster. The student population, combined with a steady demand from persons 75 years and older, continues to fuel demand for rental housing in the City, specifically high-density dwellings. The City is also anticipated to accommodate a growing share of young adults and new families (ages 20 to 44) seeking competitively priced home ownership and rental opportunities.

By 2046, the City's population is forecast to grow to 146,300, which is a total population increase of 18,600 between 2016 and 2046. When the student population that is not captured in the Census is included, the City's population base is forecast to reach 180,300 by 2046. Housing preferences are anticipated to continue to gradually shift towards high-density housing forms over the long-term forecast period based on demographic data. Given the intent of the Williamsville Main Street Study to promote infill and redevelopment on the vacant and underutilized land in the corridor, the lands within the Williamsville Main Street are well-positioned to accommodate a reasonable share of this projected growth.

More recently, Council received the [2019 Vacancy Rate Report](#) at its meeting on March 3, 2020. This report was an update on the primary rental market vacancy rate for the City, which has increased from 0.6 percent in 2018 to 1.9 percent in 2019. A healthy vacancy rate is considered by the Canada Mortgage and Housing Corporation to be three percent. This means that the City urgently requires an additional supply of rental housing and will require more supply to be added over time to accommodate overall projected growth. The report also looked at affordability and rental rates, which are rising quickly, and the dynamics that exist between vacancy rates (supply) and population, housing, and employment trends (demand).

The report noted that the City appears to be growing at a faster rate than what was forecasted which could be contributing to the lack of available housing currently being experienced in the City. Progress has been made in terms of improving the overall housing supply, with many units recently occupied or currently under construction. However, the report indicated that in order to ensure a continued supply of housing that offers a diversity of housing types, affordability and sustainability, it is necessary that there be a sustained effort across a variety of options and initiatives.

With respect to the total number of housing units targeted between 2019 and 2022, the City has met approximately 32 percent of Council's strategic goal this year alone. In order to fulfill the total goal of 3,045 new housing units and achieve a three percent

vacancy rate by 2022, the City will need to have strong subsequent years of new unit construction. It is important to note that the number of units required to achieve a vacancy rate that is in the range of three percent was based on the population projections. The actual number of units needed may be higher if the population continues to grow at a faster pace than projected.

In summary, the City has a need for additional residential units in both the short and long terms. Detailed growth allocations are being determined City-wide through this project together with the Central Kingston Growth Strategy and the North King's Town Secondary Plan, and will be continually refined as more detailed information related to servicing capacity becomes available. We are recommending that approximately five to seven percent of the City's residential growth to 2046 be directed to the Williamsville Corridor, which represents approximately 3000 additional residential units.

### **3.2 Affordability**

While the Williamsville Main Street has historically provided relatively affordable housing options, recent investments and redevelopment are putting upward pressure on costs. The Williamsville neighbourhood has been subject to gentrification for some time, but the pace of change seems to be increasing.

Affordability initiatives at the Provincial level include new direction and options for municipalities. Permission for second residential units has resulted in a sharp uptake in their construction, with building permits issued for 90 second residential units as of September 25, 2020. In 2019, 33 permits were issued for second units, with approximately 100 permits issued over the last five years.

More recently, the new Provincial Policy Statement 2020 changed the direction for second residential units to "additional residential units", indicating that municipalities must consider allowing three units as of right. Planning Services is undertaking detailed analysis in coordination with Utilities Kingston to determine servicing capacity impacts for this change.

While additional residential units are typically associated with low rise forms of development, another possible Provincial tool is Inclusionary Zoning, which can require affordable residential units to be included in a multi-residential development. This is the form of development most likely to continue along the Williamsville Corridor, providing a greater range of forms of housing within the mostly low-rise Williamsville neighbourhood. However, in 2019, the Province passed changes to the Planning Act related to Inclusionary Zoning in the *More Homes, More Choice Act* in 2019, which were previously detailed in [Report Number 19-156](#). The changes have a significant impact on Inclusionary Zoning in Kingston, as the changes restrict the application of this affordable housing tool only to those municipalities that are prescribed by the Minister of Municipal Affairs and Housing, or those municipalities who can scope the application of

Inclusionary Zoning policies to areas within a protected major transit station area or a community planning permit system. At this time, Kingston does not meet any of the criteria required by the Planning Act, since there are currently no municipalities prescribed by the Minister and it does not have a protected major transit station or a community planning permit system as defined by the Planning Act.

Planning Services is working with Housing and Social Services to support and encourage affordable housing options City-wide, including in the Williamsville Corridor. Our groups work with a spectrum of affordability that includes affordability based on various definitions, as well as types of supportive housing options.

## **4.0 Heritage and Character**

### **4.1 Cultural Heritage Resources**

Planning for the conservation of cultural heritage resources is governed by the Planning Act together with the Ontario Heritage Act. The Planning Act focuses on built heritage and cultural heritage landscapes, while the Ontario Heritage Act considers cultural heritage somewhat more broadly. The City of Kingston's Cultural and Planning Services departments uses the tools of both Acts to conserve built heritage resources across the City.

Increasingly, Planning Services is adopting a more inclusive view of heritage conservation and broadening the scope of what is considered when identifying the City's heritage resources. Cultural Services is supporting this work with the expertise already available in that department and its years of experience with broader considerations of cultural heritage, such as museum and educational programming and community consultations on issues related to community identity. The Planning Services department is benefiting from current initiatives such as Sir John A. 360 and Your Stories, Our Histories. This is critical work at a time when intolerance, inequality and bigotry is still a daily struggle within our communities.

Many consider heritage to refer to older, picturesque buildings. In fact, a heritage building is different from a historic building. Heritage can be anything identified as having cultural heritage value or interest by a community. It refers to what is inherited through generations, and it is a key element of who we are as a group of people. It includes concepts, practices and beliefs passed down through generations and shared among current communities.

When we talk about heritage value, we are also talking about community values. Our shared cultural heritage impacts how we see ourselves and what we collectively believe. It impacts how we relate to one another and how our communities look and feel to live in.

Other possible approaches include cultural heritage landscapes and “intangible heritage”, which is place-based identification of community stories and naming, local cultural narratives and/or customs.

## **4.2 Built Heritage Resources**

The heritage work conducted for the Study provided recommendations related to identification and conservation of specific properties with Princess Street frontage. These built heritage resources are protected under the Ontario Heritage Act as designated heritage properties.

This work did not consider impacts to built heritage resources adjacent to Princess Street in the side streets off the corridor. Because these areas are now undergoing additional development pressure due to the growth in the corridor, the city’s Heritage Properties Working Group is undertaking work to identify additional heritage resources in the surrounding neighbourhoods, and staff expect to recommend to Heritage Kingston and Council that additional properties be afforded protection under the Ontario Heritage Act in early 2021. In particular, Chatham Street has been identified as a side street with a number of valuable heritage resources and a unique character and pedestrian experience due to the narrowness of the street and the mix of dwellings that frame the street.

As part of the background work for the Study, a Heritage Character statement was drafted which states:

“The Williamsville study area is a linear mixed use district with land uses and built form largely determined by the evolving nature of Princess Street.”

Character defining elements include:

- Remaining stone, frame, and brick house-form buildings;
- Remaining stone, brick and frame commercial and mixed use terraces;
- Examples of automobile dealerships, service stations and motels; and
- Patterns of streets and blocks determined by the juxtaposition of the Princess Street axis and the municipal street grid.

The Williamsville area is currently undergoing significant development interest as this section of Princess Street continues to evolve. Princess Street is identified in the Official Plan as the main focus for intensification in the City, and as an important transportation corridor. Much of the work of the Study focuses on improving the streetscape and pedestrian experience to support walkability, active transportation, and transit use, while maintaining the character of the area.

Due to the character of the area being based on its evolving nature, the Study did not identify a specific heritage character for the area beyond protecting existing heritage

resources. The character defining elements included land uses that are no longer desirable in its current context, such as automobile dealerships and service stations. Existing single-family dwellings along Princess Street can present a challenge for adaptive reuse to commercial uses and underutilize a site within an area intended for intensification. Additionally, several of these dwellings have a minimal setback from Princess Street, leaving few options for an improved and widened pedestrian realm. It is important to balance goals to maintain the character of the area with the opportunity presented by the Williamsville Main Street to accommodate some of the City's much-needed residential intensification.

### **4.3 Character Areas**

In addition to the heritage character of specific sites, the Study also identified three defined Character Areas within the study area. These were:

- City Designation (Bath Road/Concession Street to MacDonnell Street)
- Community Destination (MacDonnell Street to Alfred Street)
- The Gateway (Alfred Street to Division Street)

The City Designation and Gateway character areas were identified as redevelopment areas. The Study noted that these areas have the appropriate context to accommodate buildings up to 10 storeys, and that new development should be served with a predominately commercial ground floor. As discussed earlier, the Study did not contemplate lot consolidation or what heights might be appropriate when lot depths increased. At present staff have noted that these character areas have the most buffering from adjacent low-rise residential neighbourhoods.

The Community Destination character area was noted as having the largest redevelopment potential based on the 2012 lot fabric and built form. Building heights in this area were intended to be predominately 6 storeys, with buildings up to 10 storeys accommodated on "special sites". As assumed by the Study, the City has seen significant development uptake within the Community Destination character area, with three 10 storey buildings currently proposed, approved or under construction. Although the 2012 lot depths in this area were the largest, this character area also has the highest concentration of adjacent low-rise residential development.

These character areas reflect the changing built form and uses along the Williamsville corridor, with variations in each but relatively little variation in development requirements. The Study provides the more detailed background on these character areas, but going forward the Official Plan will be organized and simplified based on development requirements, with a minimum of text to convey the intent behind them in terms of function and form.



Staff are also recommending including more emphasis on the irregular and unusual street patterns of the corridor, which in the words of one community member are “wonderfully wonky”.

## **5.0 Challenges in Implementation**

Since the enactment of the Princess Street Corridor Specific Policy Area policies for the Williamsville Main Street in the Official Plan on July 17, 2013, there has been significant interest in the redevelopment of vacant and underutilized parcels of land in the study area. The Study projected that there would be 1278 residential units in the short-term (5-10 years) and 4023 residential units in the long-term (10-25 years). With current development in the study area, there are 2220 residential units that are either approved or proposed. This is the same as a 15-year supply within the first seven years of the current policy and zoning framework (2013-2020). While the enactment of the Williamsville policies has seemed to spur development along the corridor, some elements of the Study and the implementing policies have created challenges for applicants, members of the public, and Planning Services staff. It is worth noting that the developments at 630 and 655 Princess Street were approved prior to the implementation of the Study in the Official Plan and zoning by-law. The sections below outline some of the challenges that emerged through the implementation of the Study, in order to frame the recommendations included in this addendum.

### **5.1. Building Height and Location**

The Official Plan policies enabled sites across the study area to be considered candidates for 10 storey buildings, since the main requirement for additional height was lot depth. The Study relied on the lot fabric in place at the time of the Study and did not contemplate lot consolidation to achieve greater lot depths. As a result, the Study envisioned a stronger degree of limitation with respect to locations where taller buildings could be situated, and identified five potential parcels of land within the corridor that may be able to accommodate taller buildings based on the existing lot fabric. These locations were noted as conceptual and intended as illustrations of what might result from the implementation of the Study’s recommendations. These locations were based on the assumption of a static lot fabric, which should not have been assumed as lot consolidation is possible and often desirable for land development.

The sites included in the Study understandably resulted in specific expectations among members of the community and staff about where additional height could be constructed. However, without detailed requirements for specific locations for ten storey buildings (i.e., a height map or more detailed locational criteria) staff did not have the tools to achieve the conceptual outcome illustrated by the Study of a very limited number of taller buildings.



On the development side, the general enabling policy for 10 storey buildings within the corridor inflated land value expectations among both sellers and buyers of land based on a reasonable policy interpretation of development potential. This created an incentive to consolidate land at purchase prices that assumed 10 storey development rather than the 4 to 6 storey scale intended by the Study. After these consolidations took place, development of less than 10 storeys was vigorously opposed by applicants based on arguments of viability, in large part based on the inflated land prices. Since the implementation of the Williamsville Main Street Study in 2012, there have been 41 development applications submitted for properties in the study area. Most of the applications have been minor in nature (e.g. minor variances, consents for easements, heritage permits, etc.); however, there have been six large-scale developments that have proposed to build to the maximum height permission of 10 storeys.

Going forward, staff want to ensure clarity of policy to give greater certainty to community members and proponents while generally realizing the vision of the Williamsville Main Street Study wherever reasonable and viable. The recommendations in this Addendum will generally achieve this goal, while also providing greater conformity with the broader goals of the Official Plan and Council's direction.

### **5.2 Angular Plane and Stepbacks**

To deal with shadow impacts of taller buildings, the Williamsville Main Street Study recommended that sidewalks within the corridor should maintain 5 hours of sunlight between the Spring and Fall Equinox. There are multiple possible policy approaches to achieving this outcome, including the use of setbacks, stepbacks, and angular planes. The Study preferred the use of a 45-degree angular plane. Staff note that this is considered a general urban design tool, but is not well-suited to the unique street layouts and parcel fabrics of the Williamsville Main Street, and did not consider the implications to project viability in the specific Kingston context.

The Study recommended extensive use of angular plane provisions, both from the front of the building along Princess Street (measured from the top of the streetwall) and from the rear of the building (measured from the rear property line).

Almost all of the recent developments seen in the study area have requested relief from the 45-degree angular plane provisions. Angular plane has proven to be difficult or infeasible to implement along the Williamsville Main Street because of the irregularly shaped rear lot lines along the back of properties fronting onto Princess Street and the proximity of parallel streets in some locations along the corridor.

For new development in Williamsville Main Street where a commercial site abuts a residential site, the rear yard angular plane applies from grade at the lot line shared with any residential development. The angular plane policy steps new development back to reduce its overall massing and increase sunlight penetration to adjacent properties. The

intent was to remove any impact that new development would have on existing residential properties.

Because the angular plane applies from grade, it restricts the building envelope by continuously shrinking the available floor plate. If the lot is narrow or irregular, this application of angular plane severely reduces the development potential of the parcel and correspondingly limits project viability.

The current policy direction could be reasonably interpreted as suggesting that midrise development is not compatible with adjacent low-rise development without significant building modification. At the same time, the policy signals that all existing residential development retains priority over any new development, and those adjacent detached properties are not expected to be, or able to be, impacted, regardless of the public interest issues involved. Put another way, regardless of Council decisions such as the Declaration of Climate Emergency, the highest priority in city policy is in fact low density compatibility. Such a signaling is incompatible with the intent of many Council-approved policies and directives.

This approach does not equitably balance the long-term vision for intensification in the Princess Street corridor, a central spine in the middle of the City with high levels of connectivity, amenity, transit, and active transportation facilities. It weighs the perceived impact to individual landowners above broader public interest goals that significantly serve the community as a whole.

Compatible rear yard transitions can be achieved by means other than the angular plane that more equitably address the objectives of policy and Council directives and mitigate against unreasonable impact on adjacent properties.

As is typical for most land use planning studies at the time, no economic feasibility analysis was conducted to determine if the recommended development permissions were feasible in the short or long terms.

As an additional note, Staff have heard through multiple applications that the angular plane requirements are not structurally feasible to accomplish in wood-framed construction. Through Density by Design, the City is proposing to promote more wood-framed construction, where possible, for sustainability and affordability reasons. Taller wood buildings are anticipated as cross laminated timber (CLT), also known as “Mass Timber”, construction becomes more common and is permitted for taller buildings in the National Building Code.

Additional setback requirements were also implemented through zoning based on the Study in an attempt to further articulate building massing, reduce shadow impacts, and mitigate the pedestrian’s perception of height. Through consultation with the public, staff

have continued to hear support for building setbacks above the fourth storey in order to reduce the shadowing impacts and “presence” of buildings on the street.

Angular plane provisions can be effective in achieving transition and allowing sunlight penetration but are a challenging tool to implement in this context. In particular, a 45-degree angular plane from grade at the rear lot line mandates a stark transition and does not result in feasible development envelopes in the Williamsville corridor.

Setbacks remain an effective way to achieve many of the goals listed above, but when combined with an angular plane requirement, result in too restrictive of a building envelope which, in many cases, is not economically or structurally feasible at present.

### **5.3 Setbacks**

#### **5.3.1 Setbacks from Streets**

The Study recommended that along Princess Street, new development should be set back a minimum of 1.0 metre from the front property line. For large redevelopment sites in areas where the right-of-way (building front to building front) width is constrained, the Study recommended an additional setback of at least 2.0 metres to accommodate spill out spaces for patios and/or retail overflow.

In total, the Study recommended a minimum 4.0 metre sidewalk for each side of Princess Street, which would be achieved through setbacks from the property line and through boulevard widening. In the context of the Study the widened sidewalks were intended to prioritize pedestrian movement, but also to provide opportunities for social and retail activity and amenities (e.g. street trees, plantings, snow storage, benches.)

The sidewalk width recommended by the Study has been found to be unachievable with the current 1.0 metre minimum setback requirement, which was also recommended by the Study. Given that Princess Street in most areas is quite narrow for the arterial street demands of pedestrians, transit and vehicles (approximately 20 metres), it is not possible for the City to achieve any additional space. As such, there is presently little room to accommodate anything beyond the basic infrastructure requirements of an urban street within the existing right of way. To accommodate the widened pedestrian realm recommended by the Study, as well as the street trees, benches, and active commercial frontages identified as important in the Study, additional setbacks are required.

#### **5.3.2 Setbacks from Residential Properties**

The Study recommended (and a 2018 City-led Zoning By-Law Amendment clarified) that new developments should be setback 8 metres from a lot line abutting an existing residential use. This 8 metre setback was intended to allow space for a future lane in order to accommodate parking entrances and loading spaces away from Princess Street at the rear of a property. Where a site abuts an existing lane, the lane can be

included for the purposes of establishing the setback as this lane would serve the same functional purpose.

In some cases, the creation of a rear laneway is not desirable given the irregular shape of a lot. In such cases, the 8 metre setback requirement should be maintained to provide a distance-based buffer but may include landscaping and/or other functional elements rather than a laneway. The exclusion of a rear-laneway will be at the City's discretion based on the site context. In some cases, at the city's discretion, it may be more appropriate to provide a low-rise transition to adjacent built form, in which case the setback from an adjacent residential lot could be reduced to less than 8.0 metres. This policy is outlined in the Official Plan Amendment for the Williamsville Main Street; however, it is not included in the revised C4 Zone provisions for the area. Therefore, proposals that do not meet the required 8.0-metre setback from the rear lot line will be required to seek zoning relief, which will involve the opportunity for public consultation.

### **5.4 Supporting Viable Commercial Spaces – Ground Floor Conditions**

Section 5.7 of the Study notes that the floor-to-floor height of the ground level should be a minimum of 4.5 metres to facilitate retail uses at grade and ensure that the ground floor has a continuous character as the area transitions. The Study also specifies specific locations where new buildings should contain active and publicly-oriented retail uses or other appropriate commercial uses at ground level. These recommendations were made to create a cohesive and pedestrian-oriented urban environment and to ensure public accessibility of all buildings along the corridor.

Within certain areas, at-grade residential uses are permitted on an interim basis. However, the ground floor is required to be constructed to the 4.5 metre height outlined above, to allow for conversion to commercial uses in the future as the population in the corridor increases.

Properties with frontage along side streets, including corner sites, can include at-grade residential uses on a permanent basis. In the case of corner sites, commercial uses should wrap the corner, occupying a frontage ranging between 9 to 12 metres. Beyond this point, the building should transition to include at-grade residential uses with individual unit entrances.

Based on early development in the corridor that was approved before the changes recommended through the Study were implemented, it is clear that commercial space along Princess Street needs to be accessed at grade. Examples of spaces built with below grade commercial units, or even units in buildings without ample independent at-grade entrances, have proven problematic in terms of attracting and retaining commercial tenants.

Policies and provisions for the Williamsville Main Street have been strengthened to ensure that ground floor height and at-grade access for commercial uses are a requirement. The revisions to the C4 Zone clearly identify the locations where ground floor commercial uses are required, and no changes are recommended at this time from the previous requirements.

The provisions also require the commercial uses, (where required, to cover the entire street frontage of the first storey (excluding lobbies and entrances for permitted residential uses). The zoning requires all first storeys to be constructed to a minimum height of 4.5 metres even if initially for residential use, to permit future conversions to commercial uses. The definition of first storey included in the revisions to the C4 Zone indicate that it is the floor closest to finished grade and will exclude any floor of a building located below finished grade.

Where there may be a proposal for a single use ground floor retailer, policies have been included in the revisions to the Official Plan policies for the Williamsville Main Street that direct the frontage to remain an active part of the streetscape. This would include providing liner shops – small store frontages that would line the majority of the frontage with the exception of the entrance of the major retailer – and would prevent building elements that would negatively impact the pedestrian experience at the ground level, such as blank walls, opaque glass, and the installation of lifestyle panels depicting photos and images for the retailer.

### **5.5 Provision of Public Open Space**

The Study also recommended the introduction of small urban parks, commonly referred to as parkettes, along Princess Street within the corridor. The Study illustrated potential locations for such parks; however, these locations were included for visioning purposes and were not required or, in some cases, implementable.

This section of the Princess Street corridor is fortunate to be close to a number of public parks, including Victoria, Compton and Churchill Parks to the south and the Kingston Memorial Centre to the north. In addition, through recent development applications, small urban parkettes have been secured or are currently being negotiated along Princess Street at the northwest corner of Frontenac Street, the southwest corner of Nelson Street, the northwest corner of Alfred Street, and the northwest corner of Chatham Street. These parkettes are associated with ten storey building proposals.

The Official Plan allows land for public open space to be acquired through purchase, donation, the provisions of the *Planning Act* for parkland dedication, or a combination of these methods. It is important to continue to be thoughtful moving forward in consideration of parkland requirements, given the distribution of parkettes that have already been secured or that are currently being negotiated. The location of public open spaces should be strategic to ensure greater potential for a more functional public open

space. The pedestrian realm that connects these parkettes and larger community parks, should be considered as part of the public open space system, in order to provide for an integrated open space network in Williamsville.

### **5.6 Transportation Network Analysis**

The transportation analysis completed in 2012 to support the Study considered the long term requirements of the transportation network utilizing vehicle based traffic analysis and the as-of-right permissions extended across the transportation corridor.

The transportation corridor right-of-way that existed at the time of the 2012 study was typically constrained to approximately 20 metres. This right-of-way was largely comprised of two vehicle travel lanes with right and left turn lanes for vehicle turning movements at select intersections, concrete sidewalks on either side, and block specific segments of on-street parking where width permitted.

Since the completion of the original Study a number of changes to the transportation patterns and corresponding use of the right-of-way within the area have occurred including:

- Addition of express route transit that has added high frequency service connecting Williamsville to all urban and sub-urban areas of the City;
- Addition of on-road cycling lanes and corresponding removal of short-term on-street parking where space was constrained along Princess Street;
- Time-of-day parking restrictions within the Williamsville neighbourhood north of the study area, as part of the parking management strategy for this area to address spillover of parking into residential areas by commuters
- Addition of expanded sidewalk and transit stop amenities in reconstructed segments of Princess Street from Bath Road to MacDonnell Street.

Given these changes to the transportation network and the significant level of intensification seen on specific sites it is expected that there will be impacts to segments and intersections along the corridor to a greater extent than that which was originally considered in the initial Study.

Accordingly, a re-assessment of the overall transportation network performance under current and future land use scenarios was completed as part of this update to ensure that the network capacity was sufficient for all modes of travel (active, transit, and vehicular) and that the impacts on the Study area were appropriate and consistent with the City's broader transportation goals.

This analysis considered all modes of travel including active transportation, transit, and vehicular and utilized updated population, employment, and neighbourhood travel information to test network performance. The assessment considered capacity, impact

on travel times, potential for vehicles to infiltrate the adjacent residential areas, and intersection operation. The details of the transportation analysis are discussed further in Section 5 and in Appendix A.

The analysis concluded that the existing network was capable of accommodating the additional vehicle traffic associated with the existing and active/approved developments within the Williamsville corridor in a satisfactory manner without any optimization or changes to the infrastructure in place. The longer-term ultimate growth scenarios envisioned for the area do create issues within the transportation network during the weekday PM peak hour that will require optimization and changes to the existing infrastructure.

These findings are key to the next steps of the transportation analysis as it confirms that the policy direction for the area and the City, that is to prioritize active and transit users ahead of vehicles, can be undertaken. Only in the longer term growth scenarios are there issues that begin to develop for vehicles that may warrant intervention.

To ensure the long-term viability of the transportation network in Williamsville consideration must be given to the availability of right-of-way and the corresponding highest and best uses to support the transportation needs of the neighbourhood and transportation goals of the City. The constrained right-of-way width of 20 metres on Princess Street remains and the updated transportation analysis recommends that the priority of modes, conceptual right-of-way design, traffic operation, and on-street parking be reviewed in more detail to mitigate future concerns.

### **5.6.1 Travel Mode Priority**

The residential growth in Williamsville, both in the near and long term, is expected to have relatively high active and transit mode shares and improvements to active transportation and transit facilities are key to maintaining the low auto mode share, which is critical to maintaining the viability of the Williamsville transportation network.

Prioritizing active and transit modes over vehicular travel is consistent with the transportation goals of the City and is supported by the observed household travel patterns of the existing Williamsville neighbourhood residents where only 35% of trips were made in a vehicle.

### **5.6.2 Developing an Updated Right-of-Way Concept for Princess Street**

Improvements to active transportation and transit facilities are key to maintaining the low auto mode share. However the constraints posed by the narrow right-of-way for the Princess Street corridor, typically 20 metres wide, through the Study area must be reviewed. Due to the limited right-of-way, it is unlikely that Princess Street can simultaneously function as a pedestrian-friendly corridor, cycling route, transit priority corridor, and an Arterial class roadway leading to the downtown core.

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The right-of-way concept developed as part of the 2012 transportation study sought to balance the provision of space for all modes however the new analysis suggests that compromises must be made to improve multi-modal mobility while recognizing the limited space.

Preliminary review suggests that this section of Princess Street, in the long term, should be focused on supporting multi-modal improvements by establishing a hierarchy of uses that supports pedestrian movements and includes priority for transit, while providing opportunities for amenity space along the corridor. Given the constraints, sufficient space may NOT be available in the long-term to:

- permit all existing turning lanes at intersections;
- allow all existing turning movements at all intersections;
- retain on-street parking;
- maintain or enhance the dedicated buffered cycling lanes along the corridor.

The next phase of the transportation analysis, slated to continue after adoption of the Study addendum, will identify the preferred role, function, and resulting updated cross-section for Princess Street. This expanded study will include additional public consultation and transportation modeling to refine the recommended design of the right-of-way for Princess Street including intersections and crossings.

This work will include additional public consultation with the development of an updated conceptual cross section for Princess Street from Bath Road to Division Street that will identify the pedestrian and transit elements to be included moving forward. This work will also include more detailed study of the Princess Street intersections to ensure that pedestrian and transit priority is incorporated along the corridor.

The WMSS included a number of public realm design elements to consider as part of the future Princess Street design including guidance on parking, boulevards, signage and lighting. These elements will be considered as part of the Princess Street conceptual design however the constraints of the space may not allow all elements to be incorporated into the final design. Consultation on the conceptual design of the Princess Street corridor will allow for input on how or if these elements from the 2012 study can be incorporated.

The recommendations included in this addendum include increased setbacks for development. This could allow more flexibility when determining the future cross section. The proposed amendments to the Official Plan and zoning bylaw in this location can move ahead of the detailed design of the right of way.



### **5.6.3 Intersection Performance and Design**

The transportation analysis modeled intersection performance (delay, queues, and level of service) for existing study area intersections to identify any improvements that would be needed.

The existing and approved/active development scenario show all intersections operating at an acceptable level of service although there are several individual turning movements that will require improvement in the shorter term.

The long-term ultimate land use shows four intersections operating at a marginal or deficient service level during the weekday PM peak hour.

Mitigation of these issues could be accomplished through optimized signal timing, restricting turning movements, and ensuring that pedestrian and transit movements are prioritized to minimize any delays for non-auto modes.

Detailed recommendations on improvements for specific intersection operation and design will be considered as part of the next phase of the transportation study.

### **5.6.4 Adjacent Side Street, Connectivity, and Green Street Concepts**

The various north-south side streets through the study area corridor all show an increase in the amount of vehicular traffic in the contemplated development scenarios, particularly as it relates to the long-term scenario in PM peak.

While some of this increased vehicle traffic is due to the new development being located on a local roadway, a component of the increase can be attributed to traffic infiltration (short-cutting) through residential areas to avoid congestion elsewhere. Mitigating this infiltration will likely require a combination of turn prohibitions from Princess Street, traffic calming, and traffic signal optimization.

Similar to the Princess Street corridor, the side streets must prioritize pedestrian and cycling activity to ensure that the number of active trips, particularly as it relates to the residential growth is fostered. The side streets are important components of the neighbourhood cycling network particularly if sufficient space is not available to maintain or enhance the cycling route along Princess Street.

One additional element of the public realm design guidance from the 2012 WMSS study included a desire for “Green Streets” to be developed for Albert Street, Frontenac Street, and/or Alfred Street. The WMSS describes a green street as significant tree-lined corridors, which create important visual links and enhance pedestrian and cyclist connections between areas within and surrounding the Williamsville Princess Street corridor.

At present, the green street design elements have not been developed or implemented and similar to the review of the right-of-way design for Princess Street, their incorporation requires redesign of the existing side street cross-sections to accommodate additional trees and other landscape elements. While landscaping treatments and trees are supported within the City's transportation policies these changes also need to be considered in the context of the needs of the transportation network, active transportation infrastructure, and constraints associated with underground services.

Although the scope of the transportation analysis will not include detailed design work for the north-south streets that cross Princess Streets, the work will inform the intersection design and identify how the north-south streets will function in the long term transportation network. This will provide a basis to develop the conceptual approach for green streets in the future.

Detailed design of the north-south streets that cross Princess Street, including those identified as future green streets, is not planned at this time but would be scheduled pending future reconstruction work of the side streets.

Planning Services staff will continue to coordinate with the City's Transportation & Public Works group, as well as Utilities Kingston, to identify any opportunities for additional landscaping and street-trees when reconstruction opportunities are planned. Transportation Services is implementing the Active Transportation Master Plan that includes a specific focus on neighbourhood transportation planning including traffic calming, expanded pedestrian crossings, cycles routes, and neighbourhood programs.

### 6.0 Addressing These Challenges: The Interim Control By-Law

At their meeting on [May 21, 2019](#), Council passed the following motion:

**That** staff be directed to complete a land use planning study by Q2 of 2020 of the policy and zoning framework with respect to angular plane and the allowance for where taller buildings are permitted within the Williamsville Main Street corridor, and make recommendations specifically clarifying where taller buildings or intensification greater than that permitted by the existing zoning by-law can be supported; and

**That** staff be directed, in conjunction with the land use planning study, to complete a detailed Vissim transportation model and study of the Williamsville Main Street corridor and to complete a review of the available servicing capacity to ensure that the densities considered across the corridor can be supported from a technical perspective; and

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**That** Council authorize an additional budget of up to \$100,000.00 for the completion of the Vissim transportation model and study to be funded from the Working Fund Reserve; and

**That** Council enact an Interim Control By-law for the Williamsville Main Street Corridor as per Exhibit A (Draft By-Law and Schedule A) to Report Number 19- 152, only prohibiting intensification of lands within the study area with anything in excess of what is permitted by the current zoning by-law; and

**That** the Interim Control By-Law be presented to Council for all three readings.

The Interim Control By-Law (the By-Law) was intended to restrict development within the Williamsville Main Street Corridor for a period of one year. This timeline was extended by Provincial emergency measures related to the COVID-19 pandemic until August 24, 2020. On August 11, 2020, Council passed a 90-day extension to the ICBL, so it now expires on November 23, 2020. With the timing of this addendum and the comprehensive report to Planning Committee and the presentation of the Committee's recommendation to Council, staff sent a report to the November 3, 2020 Council meeting recommending that Council pass a further extension to the ICBL so that it will not expire until December 31, 2020.

The restriction to development in the By-Law was specific to proposals that did not comply with the permitted setbacks, height and/or angular plane requirements of Zoning By-Law Number 8499. Transition clauses were included in the By-Law to allow for development applications which were deemed complete on or before the date of passing of the By-Law to continue to be processed under the existing policy framework.

The purpose of the By-Law was to allow staff to undertake the land use planning study included in this Addendum. This Study has been completed in conjunction with a detailed transportation model and a review of the utilities servicing capacity in the corridor, to ensure that the densities considered across the corridor can be supported from a technical perspective.

This Addendum to the Williamsville Main Street Study addresses the issues identified in the Council motion above and recommends changes to the Official Plan and Zoning By-Law Number 8499 regarding:

- The location of buildings taller than 6 storeys in the Williamsville Main Street corridor;
- Removing the use of angular plane provisions;
- Increasing setbacks from streets;

- Providing rear setback options where inclusion of a laneway is not desirable;
- Providing additional policies and provisions about the setback of upper floors of buildings to help control built form;
- Providing additional policies and provisions about building width to break up the length of a larger building along a block;
- Strengthening wording about ground floor conditions of buildings, particularly where at-grade access and 4.5 metre ground floor height is required;
- Removing references to out-of-date uses/terms in the C4 Zone and including some new permitted uses that are in keeping with the area, such as clinics and offices for not-for-profit and social service agencies; and,
- Making minor boundary adjustments as described and illustrated in the Official Plan Amendment and Zoning By-Law Amendment (Appendix I). Revisions were looked at across the project area with the intent to improve consistency between the Official Plan designation and the zoning, and to “clean up” areas where zoning lines cut through properties or buildings.

## **7.0 Supporting Technical Reports**

As part of the review of the Study, additional work has also been done with respect to transportation modelling and reviewing the servicing capacity in the corridor. Please refer to Appendix A for the Transportation Report, Appendix B for a memo from Utilities Kingston regarding servicing, and Appendix C for a Pro Forma Analysis of a hypothetical development in the corridor.

### **7.1 Transportation Report**

An updated transportation operational assessment was completed for the Williamsville Main Street Study area (Appendix A). The transportation analysis reviewed the transportation networks’ existing performance and assessed how the network may perform under future land use/development scenarios. More specifically the assessment used a transportation microsimulation to evaluate:

1. the capacity of the Williamsville transportation network;
2. the impact on travel times through the study area;
3. the potential for vehicles to infiltrate residential areas; and,
4. the impact on intersection operations.

As noted in Section 3.6, this analysis shows that the existing, approved and development under review in the Study corridor can be accommodated by the existing transportation network, provided many of the trips associated with the residential growth are made and continue to be made by active transportation or transit, as opposed to individual vehicles.

The longer-term ultimate growth scenarios envisioned for the area do create issues within the transportation network during the weekday PM peak hour that will require optimization and changes to the existing infrastructure. The vehicle trips associated with the ultimate growth scenario does have an impact on the road network and results in increased travel times, delays, queuing, as well as traffic infiltration through the residential areas.

The next phase of the transportation analysis will identify the specific operational improvements and infrastructure changes necessary for the transportation system to mitigate the impacts of the longer-term ultimate growth scenario. This work, slated to begin after the addendum is adopted, requires coordination with several City departments, including Transportation Services and Engineering Services, and will be subject to public consultation.

A detailed discussion of the analysis and next steps associated with this work is included in section 5.6 of this report.

### **7.2 Infrastructure Servicing Capacity in the Williamsville Corridor**

Planning Services is working with Utilities Kingston to obtain detailed servicing capacity information for many areas of the City. It appears that there will soon be sufficient capacity to support both the current and future development activity within the Williamsville Main Street corridor.

A summary of the infrastructure requirements is provided below, and the full memos from Utilities Kingston are attached as Appendices B and J.

#### **7.2.1 Sanitary Sewer Service**

Utilities Kingston has advised that recent upgrades include reconstruction and sewer separation from Drayton Avenue to MacDonnell Street, as well as a section of Frontenac Street in support of the original Williamsville Main Street Study. Further recent upgrades took place on Alfred and Elm Streets, creating infrastructure capacity to support 1200 people in addition to what has already been approved through the development review process. Additional improvements are planned for the section of Princess Street from Division Street to Alfred Street in 2022 to alleviate remaining capacity concerns with the sanitary sewer network (combined sewer separation).

Utilities Kingston has confirmed that it will be necessary to maintain the current holding symbol in the zoning by-law for certain properties until such time as the construction contract to implement the capital upgrades is executed whereupon the holding symbol can be removed. Once the Division Street to Alfred Street upgrade is complete, there will be sufficient capacity to support the additional growth of approximately 7,500 to 8,000 people proposed to be allocated to the Williamsville portion of the Princess Street

corridor. The proposed population is discussed in greater detail in Section 3 of the Addendum.

Utilities Kingston has also advised that the sanitary sewer was rebuilt west of Macdonnell Street to Bath Road as part of the original Williamsville upgrade in 2014. The proposed allocation of new population to this area should not exceed the current permissions, as no further sanitary sewer capacity beyond this projection would be available for this section of Princess Street without reconstruction/replacement of the existing sanitary sewer.

### **7.2.2 Water Service**

As part of the sanitary sewer reconstruction work undertaken in 2014 noted above, some watermains were also reconstructed. Utilities Kingston confirmed that the existing water infrastructure should provide sufficient capacity for the remaining unit projections proposed for the Williamsville corridor. The proposed allocations have been reviewed and raise no concerns relative to provision of potable water for typical design flows associated with domestic loadings.

Utilities Kingston has advised that the review of the water distribution system from the original Williamsville Main Street Study in 2011 indicated sufficient capacity for the estimated incremental loadings. It was noted in 2011 that multi-story developments may require on-site pump systems to provide adequate pressure and flow for domestic use on upper-level units. Similarly, on-site fire protection measures were identified as potentially being required. These requirements are not specific to Williamsville and depending on elevations and building height may be required at any location within UK's water distribution system. This should not be seen in any way as a servicing limitation from Utilities Kingston's perspective as there is sufficient pressure and flow on our system to service these developments, it just may necessitate additional measures by the developer depending on building height. However, each specific proposal will need to be evaluated on a case-by-case basis, during the planning approvals process.

In summary Utilities Kingston advised that the water distribution system for Williamsville should be sufficient for the projected population increase. Construction materials used during building construction can significantly reduce the fire flow requirements and the impacts on the water distribution system. Projects will be reviewed during the planning approvals process to assess associated construction methods in relation to the available water supply in areas such as Area "A" that present a higher risk for wood frame projects to ensure adequate water supply for fire fighting is provided.

Acknowledging the need for better definition on this issue, Utilities Kingston Engineering staff carried out a conceptual water modelling exercise on the water system to determine if any improvements would be required to support 6-storey wood frame

buildings throughout the Williamsville area and reported results at the August 13 public meeting.

Since that time, Utilities Kingston has undertaken additional review activities to further assess the ability of the water system within the Williamsville Main Street Area to provide adequate “fire flows” where wood frame buildings are the preferred choice of construction. Please see Appendix J of the Addendum for more details.

### **7.2.3 Gas Service**

UK has advised that the existing gas supply and distribution infrastructure was sufficient to handle the estimated incremental loadings from the 2012 Williamsville Main Street Study. The existing system should be able to handle the additional units, but further review will be required at the site plan control application stage.

### **7.2.4 Electrical Service**

UK has advised that currently, sufficient capacity exists within Kingston Hydro’s distribution system to provide electrical service to the pending and approved developments within the Williamsville study area. Long-term, new developments will start to present challenges to the 5kV system, but sufficient capacity exists at higher voltage (44kv) connections. Early consultation with Kingston Hydro is recommended to be able to coordinate responses on any capacity related matters affecting the 5kv distribution, again on a site-specific basis. Utilities Kingston is currently engaging the Ontario Energy Board for approval of infrastructure upgrades to support intensification.

## **7.3 Pro Forma Analysis**

Planning Services has retained Watson & Associates Economists Ltd. to prepare an economic analysis that explores the financial viability of development within the existing land use permissions for the corridor (Appendix C). Based on this analysis and initial sensitivity analysis (i.e. changing variables to compare results), it appears that the current policies and provisions that apply, including a maximum height of 6 storeys would not be financially attractive, and likely not viable, under current market conditions. This is true for a concrete building and also for wood frame construction, which benefits from substantially lower construction materials costs.

Staff are recommending several changes to the existing policies to support financial viability of development, and will be continuing to monitor land values and consult with industry stakeholders to ensure that permissions align with a reasonably likelihood of some mid-rise development proceeding in the short term, while ensuring that the outcomes represent good land use planning.

Staff are proposing changes to provide certainty about permissions, which in turn is expected to support timing of approvals, while considering reduced requirements where

reasonable. Staff have heard from previous consultations with industry stakeholders that small changes (e.g. more certainty, less parking, fewer studies, etc.) can greatly support the viability of a project, especially when taken all together.

It is interesting to note that lenders often prefer to finance the construction of residential-only buildings, and consider the inclusion of commercial space to be riskier in terms of viability.

Another consideration that can support economic viability related to financing is certainty of development permissions such as pre-zoning by the municipality rather than requiring site-specific rezoning. Lenders tend to see projects that require additional approvals to be more risky, and usually look for a higher projected rate of return in order to offset the potential risk.

### **7.4 3D Modelling**

As part of this update, staff created a digital three-dimensional model of the Williamsville corridor to illustrate different development scenarios. The model provides the opportunity to see views of the study area from different perspectives and to examine what the built form along the corridor would look like under different development scenarios.

The three main development scenarios that were explored included the following:

1. The existing built form of the corridor, plus all of the approved and proposed development applications for multi-residential buildings;
2. The as-of-right development permitted in the corridor through the current zoning; and,
3. The development that would be permitted in the corridor through the proposed zoning.

The model was used to test growth scenarios that included an additional 3,000 residential units in the corridor (population growth in the city and the corridor is discussed in more detail in Section of 7.1 of the Addendum below).

The modelling shows that in addition to the growth that is accommodated through the approved and proposed developments along the corridor, a large proportion of the remaining 3,000 units can be accommodated through a mid-rise form of development of up to six storeys. Some of the growth is contemplated in taller buildings at the two ends of the corridor, which is outlined below in Section 8.1.

Appendix F of this report includes images from the model showing the different development scenarios at different points along the corridor and from different viewpoints (i.e. bird's eye view, podium level, etc.).



## **8.0 Public Consultation**

Over the last year, the City has been actively engaging with the community on discussions about height, density and future growth through both the Williamsville review and through Density by Design: Kingston's Mid-Rise and Tall Building Policies project. The Density by Design project has generated considerable interest in the community and the engagement opportunities have included numerous workshops, pop-ups, presentations, stakeholder interviews, and an extremely popular height mapping exercise on the City's Get Involved Kingston online engagement platform.

In addition to the Density by Design events, the City has also been engaging with individuals and groups about the update to the Study, including meeting with members of the Williamsville Community Association and property owners along the corridor. A public workshop was held on February 12, 2020 at St. Luke's Church on Nelson Street in Williamsville to discuss the items related to the interim control by-law. The workshop was attended by approximately 60 residents.

Staff have heard concerns, particularly from members of the Williamsville Community Association, with the amount, type and scale of development approved in the corridor to date. Specifically, there is dissatisfaction with the number of taller buildings approved, with a strong preference for low and mid-rise buildings. Associated concerns include shadow and wind impacts of taller buildings and the potential for a "canyon" effect when taller buildings are sited on both sides of Princess Street. There is a lack of trust in Planning Services staff due to the difference in what the Study seemed to promise and what has transpired in terms of development approvals.

Staff have also heard from the Williamsville Community Association a demand for additional green space, parkettes, and street trees. Staff have heard dissatisfaction in the amount of surface parking in the corridor and concerns that the corridor will not be built out, and that vacant lots will remain for the long term. Staff have heard that setbacks for development approved to date have been insufficient, and concerns about transportation impacts, including availability of parking and the need for loading and delivery zones. Staff have also heard concerns about the impacts of construction and more generally, neighbourhood change.

Other community members have expressed concerns at the limit of 10 storeys, and thought taller buildings should be permitted in the corridor. Staff have often heard that additional height at either ends of the corridor is appropriate. Some community members noted that these sites are further away from adjacent low-rise residential neighbourhoods and in proximity to commercial nodes. Community members also generally noted that additional room along Princess Street to accommodate pedestrians and amenities like street furniture, trees and bicycle parking was needed.

On October 14, 2020, staff held an online Question & Answer event about the land economics work for the update to the Williamsville Main Street Study. There was a presentation and question and answer session with project team members including the land economist contracted for the study.

A number of questions were asked by attendees and staff provided detailed information about the economic analysis as well as how that information is being used by planning services staff in developing policy recommendations. A copy of the transcript from the session has been included as Appendix H to this addendum.

### **9.0 Recommendations**

The Williamsville Main Street Study was intended to spur development and revitalization in an underutilized area of the City, and in this regard, it has been an incredible success. However, staff are recommending the following policy changes and refinements to ensure that the resulting built form along the corridor is in line with the vision and proposed function of the area, particularly as it relates to an improved pedestrian environment.

Generally, staff are recommending a paring down and simplifying of the Official Plan policies for the Specific Policy Area.

As discussed in 7.2 Heritage and Character, staff are recommending that details related to the three character areas for the corridor continue to form part of the Williamsville Main Street Study, but are not recommending their continued inclusion in the Official Plan policies since the development requirements for each character area are essentially the same.

#### **9.1 Building Height:**

The intent of this addendum is to reevaluate and better define potential locations for taller buildings. There are a number of benefits to taller buildings from a public interest perspective when they are well designed. Taller buildings, when facilitating higher densities, make more efficient use of land, support active transport and public transit ridership, are less resource-intensive to heat and service, and provide a housing option that would not be available to the market under height restrictions. Because taller buildings are required to include elevators and are built to current accessibility standards, they also tend to be much more accessible for those with mobility challenges than low-rise buildings. When well-designed taller buildings are in walkable, vibrant areas they can create urban communities that are sometimes referred to as “Vertical Neighbourhoods”. Allowing for a limited number of strategically located taller buildings within the Williamsville corridor will contribute to the City’s overall density, sustainability and affordability goals and take advantage of existing public infrastructure investments.

As noted in Section 7.2 above, the Study was already effective in identifying three character areas within the corridor, which indicates these areas should be treated differently from each other. For example, the City Designation and the Gateway provide an introduction to the corridor and are intended to accommodate ground-floor commercial uses. These areas transition to the middle Community Destination area, which has already been seeing fairly significant development activity. Staff are recommending that additional taller buildings be limited to the City Designation and Gateway character areas.

Although infrastructure servicing capacity limitations prevent the immediate enactment of permissions for additional height in the Gateway character area, staff are recommending that once additional capacity becomes available the area be up-zoned to allow greater height to and beyond the Kingston Centre.

The permitted heights are shown on the height map below, and will be implemented via an Official Plan and Zoning By-Law schedule. They will also be included in the text of the Official Plan and Zoning By-Law, but without explicit reference to the three character areas upon which they are based.

In order to permitting additional height in specific locations in the corridor, staff are also recommending that taller buildings follow a mid-rise podium and taller tower combination form. The podium is required to be a maximum of 6 storeys, while the taller tower portion heights vary across the study area. However, all taller portions will be permitted a maximum floorplate size of 790 square metres (8500 square feet). This requirement is further discussed below in Section 8.3, Width.

The 6 storey podium and required setbacks (Section 8.2) will help to create the impression of a midrise corridor, while allowing additional height/density to be interspersed, as outlined below.

With respect to height along the Williamsville Main Street, staff recommend the following:

1. Maintain the general requirement for a streetwall height of 3 to 4 storeys;
2. Maintain a maximum overall height of 20 metres (6 storeys) within the central Community Destination character area, but remove the minimum lot depth requirement;
3. Require buildings taller than 6 storeys to be designed with a podium-tower relationship, where the podium is a maximum of 6 storeys in height.
4. Towers are permitted to have a maximum floorplate of 790 square metres (8500 square feet), and are subject to a maximum height in accordance with the following:

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- a. 61.5 metres (6 storey podium with 4.5 metre ground floor and 14 storey tower) at the corner of Princess Street and Division Street, as shown in the schedule below.



Figure 2: Proposed Height Map for the Williamsville Main Street Corridor.

## **9.2 Residential Density**

Staff are recommending a maximum residential density of 210 units/hectare for the study area, with an increase in the maximum residential density to 480 units/hectare when a tower is constructed.

The purpose of this limit is to support the distribution of servicing capacity throughout the corridor, and to ensure that individual projects are not able to claim servicing capacity such that development of adjacent lands would be prohibited or unduly impacted. The limits are included in the zoning provisions to ensure that staff have the ability to recommend variances where appropriate. This is because residential densities measured in units per hectare are not an exact science, and the specific configuration of a building can greatly impact the calculation. The intent is to ensure that density limits support the appropriate build-out of the corridor without an undue focus on the specific number.

## **9.3 Stepbacks and Angular Plane:**

As noted, angular plane provisions have not been feasible within the Williamsville corridor given irregular lot shapes and other development cost considerations. Angular plane was recommended by the Study along Princess Street in order to allow 5 hours of sunlight onto adjacent sidewalks between the Spring and Fall Equinox. This measure was intended to maximize sun exposure along the street. As seen through recent development applications, this measure can and has been achieved without implementing an angular plane.

The Princess Street right-of-way is approximately 20 metres wide. As will be discussed below in Section 9.3, an additional 3 metre setback from the lot line will be required on both sides of the street. A 6 storey building is generally around 20 metres in height; as such, the existing right of way and required setbacks will be approximately 6 metres wider within the Community Destination character area. Correlating the height of building to the width of the street helps to keep a comfortable built form experience while maximizing sunlight on the opposite side of the street.

Staff are recommending that the angular plane provisions be removed from the Official Plan and Zoning By-Law Policies, and that instead other tools are used.

While angular plane provisions are to be removed, staff are recommending that stepback requirements above the fourth floor are maintained. These stepbacks will lessen the visual massing that a pedestrian would experience at street level by pushing the higher portions of the building back above an initial street wall and cornice line. In conjunction with a lighter material on the upper levels, this will reduce the visual impact of the upper two floors on the street. These stepbacks are recommended to be a minimum of 2.0 metres in order to offer opportunities for amenity areas for mixed use

and multi-unit residential buildings, as well as opportunities to incorporate green roof technology.

Staff are also recommending the removal of the angular plane requirement from rear or side property lines abutting residential zones. The 8 metre required setback provides a functional transition and a buffer to neighbouring properties.

These recommendations are intended to continue to provide an attractive and functional public realm, and a transition to neighbouring residential properties, while also aiming to ensure that the as-of-right building envelopes are as economically feasible as possible at a 6 storey height.

With respect to stepbacks and angular plane for developments along the Williamsville Main Street, staff are recommending:

1. Replace the angular plane requirement with other tools and consider a requirement specific to the amount of sunlight on Princess Street in the Official Plan. Utilize setbacks from property lines and stepbacks of upper floors of buildings to achieve the same goals for avoiding shadows and providing transition;
2. Continue to provide stepback requirements above the fourth floor on street-facing elevations, with “shall” versus “should” wording so that they are a requirement and not a consideration;
3. Require these stepbacks on street-facing elevations to be a minimum of 2.0 metres; and,
4. Permit the projection of balconies/outdoor amenity space up to 1.5 metres outward above the fourth floor of a building frontage facing a street, and up to 2.0 metres above the second floor of a building frontage facing a lot line that is not a street.

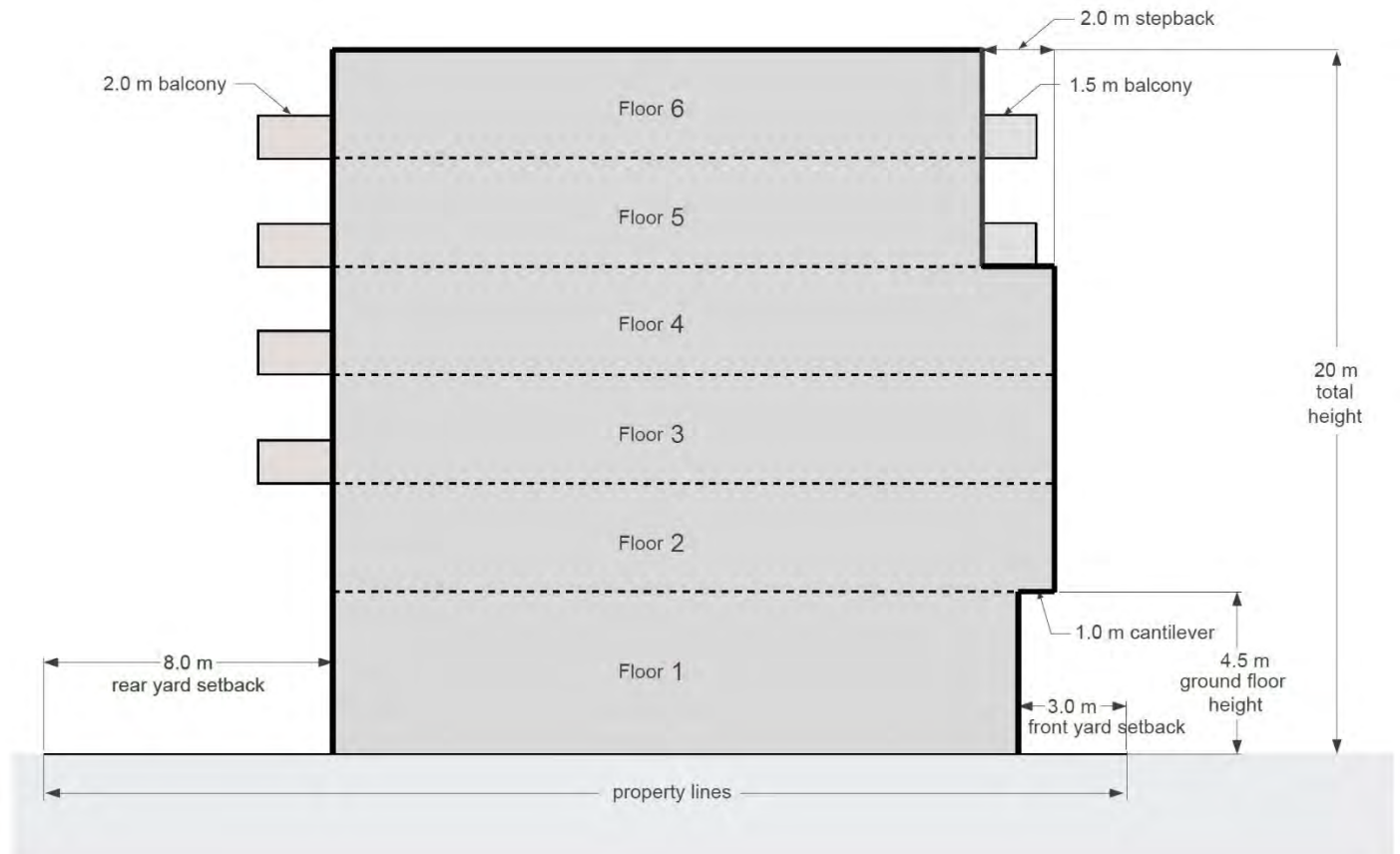


Figure 3: Illustration of Proposed Setbacks and Building Stepbacks

### 9.3 Setbacks:

As noted, in order to facilitate the type of main street envisioned by the Study, larger setbacks from the street are required. This will allow for a wider land use transition zone which may accommodate active commercial frontages and opportunities for amenities and infrastructure such as street furniture, landscaping, bicycle parking, patios, and snow storage. The additional setbacks are required given the width of the existing right of way and limitations this poses to achieve all of these elements which contribute to a functional urban environment.

The recommendations below also introduce the option for a ground floor setback of 3.0 metres along Princess Street, with the ability to cantilever the second to fourth storeys at a setback of 2.0 metres from the lot line. This would allow for a widened public realm, while also allowing an opportunity for increased floor area on the upper floors.

From the rear property line, this addendum recommends the maintenance of the 8.0 metre setback from property lines abutting a residential zone. This 8.0 metre setback provides a buffer to neighbouring residential properties and helps to mitigate potential impacts related to shadowing and overlook.

## Addendum to the Williamsville Main Street Study (November 5, 2020)

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Through the Density by Design project, the issues of construction and cost implications associated with podium design have been raised, and further changes may be warranted in the future depending on the outcomes and recommendations of this project.

The addendum to the WMSS recommends the following changes regarding the minimum property setbacks for properties along the Williamsville Main Street corridor:

1. Require a minimum front property line setback of 3.0 metres along Princess Street, Division Street, Concession Street, Bath Road, and any road identified as a “green street”. This setback would be applicable to the ground floor of the building (to a minimum height of 4.5 metres). A minimum property line setback of 2.0 metres for the remainder of the streetwall (i.e. second through fourth storeys), thereby permitting designs that included a cantilevered portion of the building for the second, third and potentially fourth floor of the building.
2. Require a minimum front property line setback of 2.0 metres along all other side streets where they intersect the corridor.
3. Maintain the requirement for an 8.0 metre setback from any property line abutting a residential zone. Include language indicating that, at the City’s discretion, where a rear laneway is undesirable for a particular lot, the 8.0 metre setback may instead include landscaping or other functional elements. A policy has also been included in the Official Plan that where a development steps down in height sufficiently to appropriately transition to the buildings on the neighbouring properties, it may be appropriate to decrease the rear yard setback. Such a change would require a public process through an application for zoning relief.
4. Where development is proposed along an entire block face, modify the requirement of a minimum of 75% of the building being built to the front property line to also be a maximum, thereby requiring 25% of the building to be setback to break up the massing of the building, and allow for light penetration and opportunities for amenity areas, tree planting, etc.
5. Include the following table in the zoning by-law that speaks to maximum and minimum setbacks and stepbacks for different yards/streets:

<b>Setbacks and Stepbacks</b>	<b>Minimum</b>	<b>Maximum</b>
Front setback and exterior setback (along Princess Street, Division Street, Concession Street or Bath Road) – first storey	3.0 metres	5.0 metres
Front setback and exterior setback (along Princess Street, Division	2.0 metres	5.0 metres



## Addendum to the Williamsville Main Street Study (November 5, 2020)

Street, Concession Street or Bath Road) – second, third and fourth storeys		
Stepbacks where the building faces Princess Street, Division Street, Concession Street or Bath Road – fifth and six storeys	2.0 metres from the exterior wall of the fourth storey	Not applicable
Front setback and exterior setback (along all other streets) – first through fourth storeys	2.0 metres	5.0 metres
Stepbacks where the building faces all other streets – fifth and sixth storeys	2.0 metres from the exterior wall of the fourth storey	Not applicable
Interior setback (for a property fronting on Princess Street)	0.0 metres	Not applicable
Interior setback (for a property not fronting on Princess Street)	1.2 metres	Not applicable
Rear setback	8.0 metres	Not applicable

### 9.4 Building Width

Section 5.1 of the Study indicated that where new developments have building frontages over 30 metres wide, building massing should be articulated or broken up through a continuous rhythm of building fronts achieved through a pattern of projections and recessions, entrances, display spaces, signage, and glazed areas to ensure that facades are not overly long. This creates the sense of having multiple buildings along the length of the property. Vertical breaks and stepbacks should also be provided. This is of particular importance where lot consolidation occurs and proposals come forward involving an entire block. Feedback from the public about recent proposals in the corridor has included concerns about a “cruise ship-like appearance” of some of the designs.

As discussed, the historic street pattern through the corridor tends toward relatively short block lengths. Based on the maximum tower floorplate of 790 square metres (8500 square feet), for blocks where towers are permitted, it is likely that their width will fill up to 50% of the block face. For this reason it is important that the maximum tower floorplate is a strict requirement not to be exceeded in order to control building width.

Staff are recommending the following regarding the width of buildings along the Williamsville Main Street corridor:

1. Strengthening wording in the Official Plan about building width and articulation where buildings are wider than 30 metres.

2. Where development is proposed along an entire block face, modify the requirement of a minimum of 75% of the building being built to the front property line to also be a maximum, thereby requiring 25% of the building to be setback to break up the massing of the building, and allow for light penetration and opportunities for amenity areas, tree planting, etc.
3. Towers will be permitted a maximum floorplate of 790 square metres (8500 square feet).

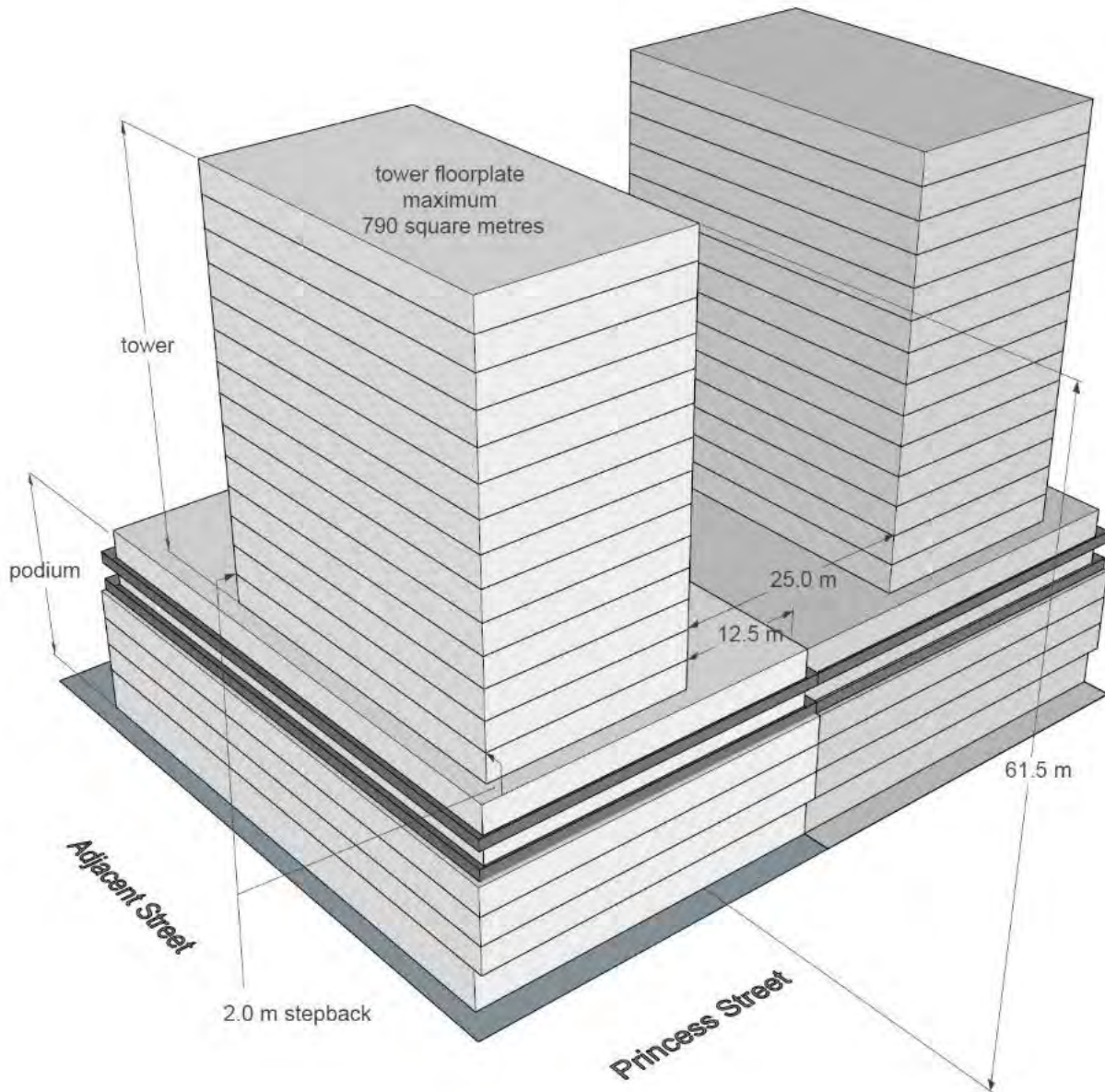


Figure 4: Illustration of Design Provisions for Buildings Taller Than Six Storeys

## **9.5 Supporting Viable Spaces - Ground Floor Conditions**

The map below illustrates where commercial ground floor uses are mandatory in the Williamsville Main Street. Staff recommend the following regarding the ground floor conditions of buildings in the Williamsville Main Street corridor:

1. Continue to permit ground floor residential uses in the central portion of the corridor, and along the side streets off of Princess Street. Encourage ground floor residential entrances on side streets to be slightly above grade to provide separation from the public realm.
2. Continue to require ground floor commercial uses in the areas illustrated below, and include wording that ensures that required at-grade commercial uses are extended to Division Street, Concession Street, and Bath Road.
3. Continue to require ground floors on Princess Street to be built to a minimum ground floor height of 4.5 metres, to enable conversion to commercial space if required in future.
4. Strengthen wording in the Official Plan to ensure that all commercial entrances along Princess Street, Division Street, Concession Street, and Bath Road are developed at-grade, with a minimum ground floor height of 4.5 metres.
5. Ensuring that where commercial uses are required on the ground floor, the entire street frontage of the first storey is occupied by those uses, except entrances and lobbies for other permitted uses, and that the commercial use wraps the corner of the building when situated on a corner lot. Portions of the floor area of the first storey that do not have frontage on a public street may be occupied by uses that service the building such as loading spaces, waste management facilities and rooms, mechanical rooms, bicycle parking facilities and other similar uses. Where a single use retailer occupies the ground floor of a building, it is expected that the majority of the frontage will still be activated by other uses, such as through the use of liner shops.



Figure 5: Ground floor commercial requirements

### 9.6 Land Use Compatibility

The Official Plan’s approach to land use compatibility is difficult to quantify and also could be interpreted to discourage development that is in the public interest, in favour of existing development. The Density by Design project will be amending those policies. In the meantime, for Williamsville, staff are recommending exempting the corridor from the policies of 2.7. This is because staff have already determined compatibility of the proposed permissions for the corridor.

## **9.7 Other Recommendations**

### **9.7.1 Mapping Changes**

#### **The Hub**

As part of this review, a small but important change in the boundary of the Williamsville Main Street Official Plan designation is proposed. The northwest and southwest corners of the intersection of Princess Street and Division Street were previously not included because they were part of the Central Business District (CBD) designation in the Official Plan. While some aspects of the CBD apply to these lands, staff believe there may be a stronger relationship with the Williamsville Main Street corridor and are recommending their inclusion.

Detailed planning has not been undertaken for the intersection of Princess Street and Division Street, known locally as The Hub. Instead, planning for this intersection will respond to work that the City's Cultural Services department undertook in 2019 as part of a new initiative called The Hub Project. This was a targeted public engagement initiative intended to connect neighbourhoods through public art by making a series of creative improvements to the intersection of Princess and Division Streets. The project included a series of public engagement sessions, that included in-person public events and stakeholder workshops, and online through the City's Get Involved platform. Through this process, the City engaged more than 350 people who shared input and ideas regarding themes and types of public art that could be integrated into the intersection. A full report on the public feedback can be found on the Project Page.

During this exercise, a number of land use planning items were discussed by members of the public and are summarized here. Participating community members would like to see more:

- Street furniture (i.e. public seating, but including water fountains, bicycle parking, bollards)
  - Location was identified as important as it could impact social "mixing" between neighbourhoods and help preserve/show off public art
- Murals on blank spaces, walls
- Colour of buildings and accents
- Natural, green, sustainable features
- Wayfinding signage, placemaking signage
- Community focal points (i.e. more gathering spaces, opportunities for play and interaction)

## **Addendum to the Williamsville Main Street Study (November 5, 2020)**

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- Opportunity for interactive/collaborative storytelling, including histories and diverse approaches to heritage
- Recognition of the “Gateway” function of the Hub between the Central Business District and Williamsville

Much like the Williamsville Main Street corridor, the existing built form at the Hub is primarily low rise with a few taller buildings nearby. The Princess Towers apartments are 17 storeys, and there are a few taller buildings of 8 and 12 storeys on nearby Brock Street. Staff have noted, and heard through many public comments on the Density by Design project, that this is an area that could support additional height and density from both a built form/urban pattern and a functional perspective. It is an area that is well-served by transit, walkable to a number of commercial amenities and employment and educational uses, and directly connected to the City’s Central Business District. Many observed that there are fewer cultural heritage resources in this part of the corridor, when compared to Lower Princess Street.

Staff recommend the following regarding the mapping for the Williamsville Main Street corridor:

1. Re-designate the properties at the northwest and southwest corners of the intersection of Princess Street and Division Street (refer to Figures 6 and 7 below) from Central Business District to Main Street Commercial, and re-zone them from the C Zone to the C4-H (T1) Zone in Zoning By-Law Number 8499.



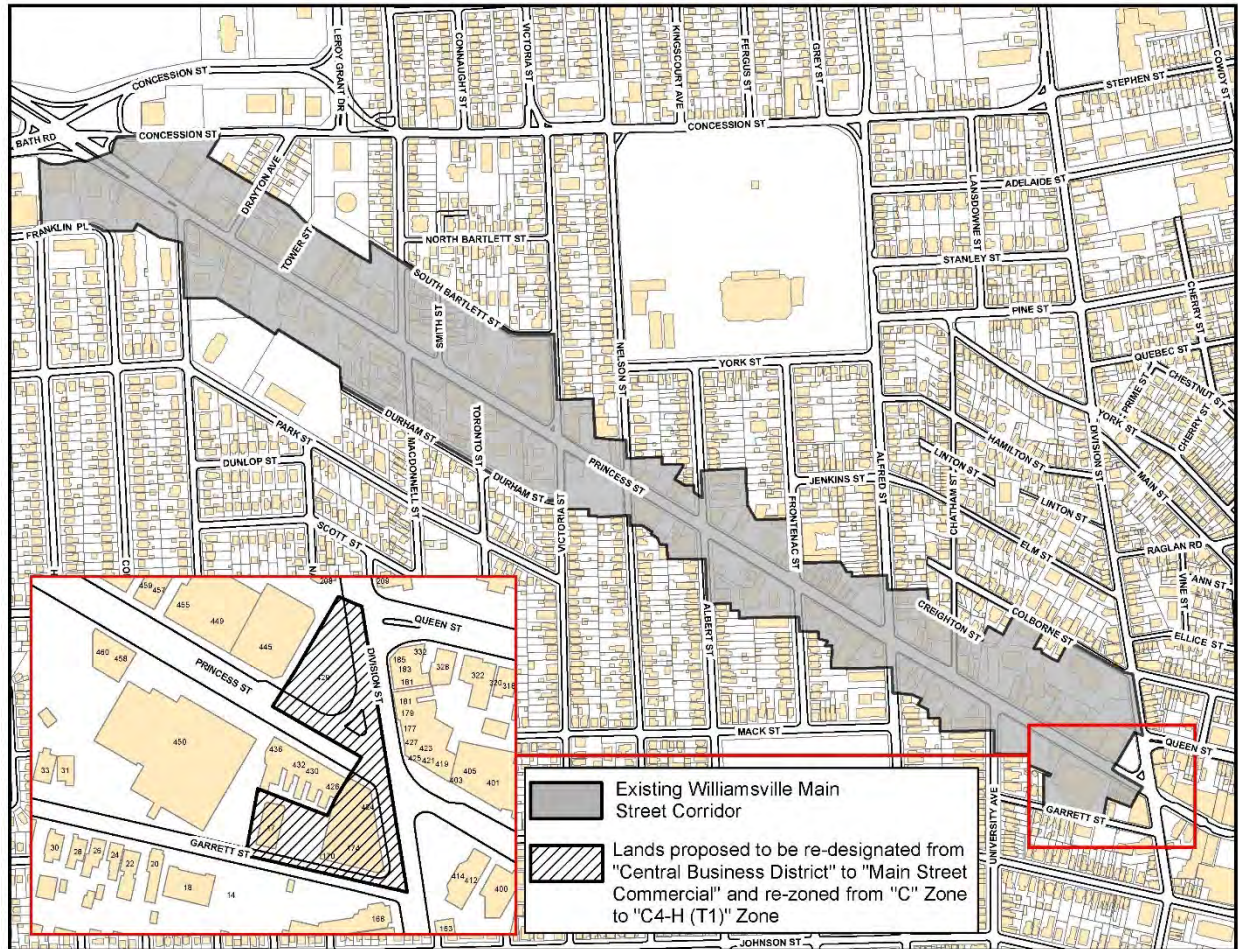


Figure 6: Proposed lands to be added to the Williamsville Main Street

### Study Area Boundary Review

Staff conducted a review of the boundaries for the Williamsville Main Street policies and provisions with the intent of rationalizing and harmonizing the boundaries in both documents. Proposed changes to the boundaries of the study area in both the Official Plan and zoning by-law are considered minor adjustments and were made based on the following criteria:

- There was a discrepancy between the existing Official Plan designation and zoning (i.e. a Residential designation and a commercial zone, or vice versa);
- The boundary of either the Official Plan designation and zoning, or both, cut through a property (and in a couple of cases a building) instead of following lot lines; and,
- Including some additional small lots in the Main Street Commercial designation or C4-H (T1) Zone where the designation/zone was already on either side of the property and/or to line up with the designation/zone directly across the street from the subject property.



# Addendum to the Williamsville Main Street Study (November 5, 2020)

Appendix I of this Addendum outlines in detail the proposed site-specific changes to the Official Plan designations and the C4-H (T1) Zone of Zoning By-Law Number 8499, which are illustrated on the figures below.

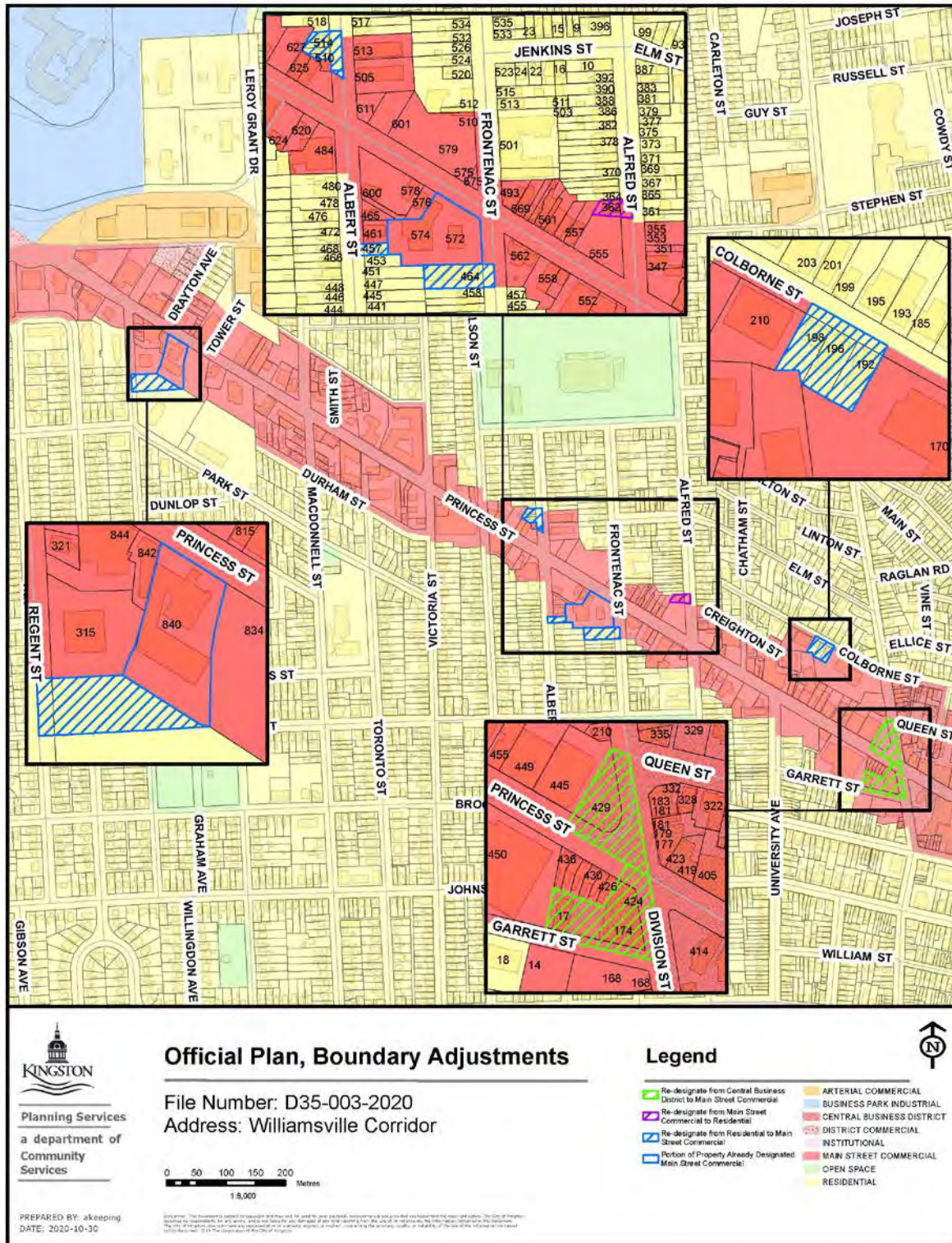


Figure 7: Proposed boundary changes to the Official Plan Land Use Schedule 3-A



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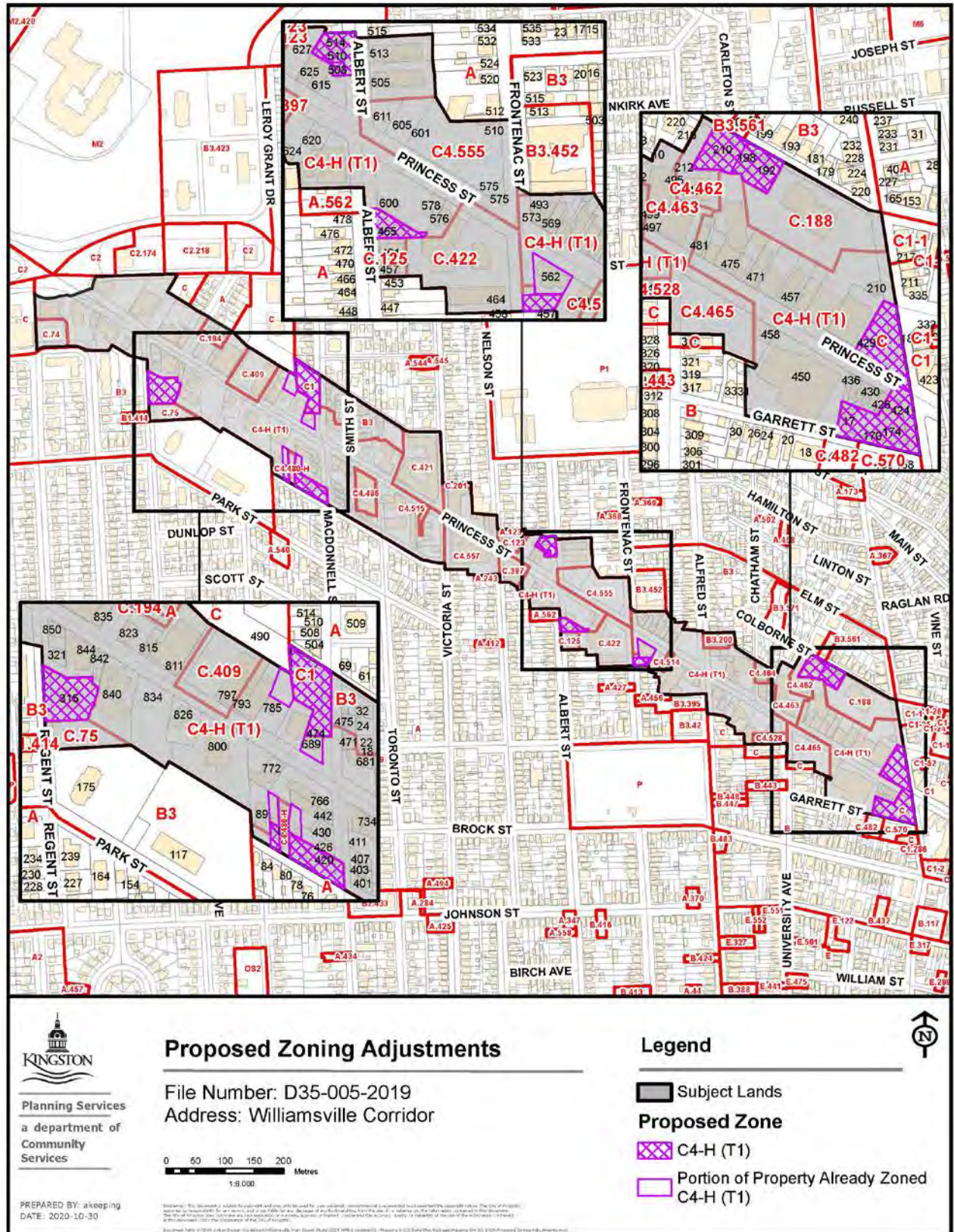


Figure 8: Proposed zoning changes in the Williamsville Main Street

### **9.7.2 Parking**

Throughout the Williamsville work program, the issue of parking supply has come up many times in many different contexts. It is widely recognized that the amount of parking constructed within projects has a significant impact on construction costs; housing and transportation affordability; vehicle traffic generation; mobility mode shift to walking, biking and public transit; public and private infrastructure costs; greenhouse gas (GHG) emissions and climate emergency implications; air pollution and public health implications; public safety relative to vehicle-involved collisions; built form and density; overall project viability; and more.

In particular, there has been a strong need since Council's leadership in passing Ontario's first municipal Climate Emergency Declaration, to ensure that the City's land-use and transportation approaches reflect that Council leadership, and are fully aligned and working to significantly mitigate our climate change impacts. Given how influential parking supply is in both land use and transportation contexts, this represents a significant opportunity to advance both our real actions to address the Climate Crisis, and our corporate knowledge around a true alignment of land-use and transportation decision-making.

Staff have observed two key trends relating to parking supply in the context of applications along the Williamsville Corridor in recent years. First, many applications have requested reductions to the standard minimum parking required in the city zoning bylaw, with 0.5 parking spaces per unit being a typical reduction request. These requests have been supported by staff and approved by Council but can represent a somewhat repetitive discussion during the application process. Second, some other applicants have proposed a high number of parking spaces that staff have considered excessive considering Council's priorities relating to the climate emergency, affordability, and other key public interest issues, resulting in debate and negotiations between staff and applicants that can add time and cost to the process for all parties.

In the case of both of these observed trends, Staff believe that all parties would benefit from clarity around the City's evolving intentions around parking requirements as an extremely important lever/tool in contributing to many of the City's key public interest goals. New parking minimums, and potentially new parking maximums in specific locations, are being considered in the context of the City's new zoning by-law project through the completion of a comprehensive Parking Standards Study. The Parking Standards Study will be the subject of a Discussion Paper presented to Planning Committee in early to mid 2021, and feedback received from the public, key stakeholders and members of Council in response to the proposed standards will inform Staff's approach to parking in the second draft of the new zoning by-law. The second draft of the new zoning by-law is anticipated to be released to the public in mid 2021 for public consultation.

In the meantime however, the Williamsville Main Street represents a strategic location to require a consistent and predictable reduced number of residential parking spaces, with a pathway in the proposed Official Plan policy to further reduce the requirement through a minor variance application with an associated public process. This reduction is being recommended by Staff in light of the trends/observations discussed above; the highly urban and multi-modal nature of the corridor; the challenges around project viability discussed elsewhere in this report (that less parking-related costs can assist with); and other public interest reasons. Establishing a lower requirement for residential spaces in the Williamsville Main Street provides an opportunity to establish a forward-thinking provision that will help to meet Official Plan policies and Council priorities focused on active transportation, promoting transit and reducing the need for vehicles in areas that are well located in mixed use areas as far as daily needs are concerned. This forward thinking approach will act as an interim placeholder until the new zoning by-law is complete near the end of 2021, at which time Staff would have an opportunity to revisit the required parking standards. If there is not enough data between now and the adoption of the new zoning by-law to determine if the reduced number of residential parking spaces is sufficient, Staff have the opportunity to report back to Council at a future point in time and revise the new zoning by-law accordingly.

Several cities across Canada and North America are in the process of reviewing the business-as-usual approach to parking minimums and maximums, recognizing how powerful such tools can be in achieving larger city goals. Recently, the City of Edmonton, Alberta removed their parking minimums city-wide for all land uses, and even more recently the City of Calgary voted to remove parking minimums for non-residential uses (a similar removal of residential parking minimums city-wide is expected to come forward shortly)..Removing or significantly reducing parking minimums is particularly effective in cities where the market, or at least some projects, would prefer the flexibility to provide less parking without having to create special parking requirements on a case-by-case rezoning basis. It is recognized however that providing a reduced minimum, or no parking minimum at all, does not prevent developers from still providing additional parking, or even excessive parking – it is merely establishing the fewest number of spaces that are required to be provided. In cities where the trend is to generally provide a large amount of parking based on the developer’s perceived demand by future purchasers or tenants of the building, a removal or reduction in the minimum number of parking spaces can end up having minimal effect on the amount of actual parking constructed. When combined with parking maximums, however, cities can provide flexibility where less parking is considered viable, while preventing excessive amounts of parking in keeping with city priorities such as affordability and climate crisis mitigation.

Based on our City’s priorities, as well as the specific observations in the Williamsville Main Street, staff recommend a reduction in the minimum number of residential parking

spaces from the current requirement to 0.4 spaces per residential unit, representing a 20 percent reduction in what we have typically approved in Williamsville through past site specific zoning by-law amendments, with no additional burden placed on the public parking supply to provide off-street, long term parking spaces. No pre-established reduction is initially proposed for non-residential parking spaces at this time, as this will be reviewed comprehensively through the city's new zoning by-law project. We expect that many projects will still provide parking in excess of the minimum requirements, and they will have the flexibility to determine how much they require. However, in order to ensure that the additional parking provided by developers isn't excessive given the locational attributes of Williamsville relative to policies seeking to balance the need for vehicular trips with active modes of transportation and transit, Staff also recommend a new parking maximum of 1.0 spaces per residential unit to avoid proposals for excessive parking that are inconsistent with the many related goals and objectives of the city.

In considering how high such a parking maximum should be, staff have considered the cases over the last several years where staff raised a concern with applicants regarding excessive proposed parking, leading to protracted discussions. Generally, such discussions occurred when parking was proposed in excess of one parking space per unit within the Williamsville Main Street. Given this, to be consistent as an initial starting point during this trial period prior to the enactment of the new zoning by-law, a maximum parking requirement of one space per unit is proposed. Note that no parking maximum is proposed for non-residential space.

Given that both the proposed parking minimum and parking maximum reflect previous positions taken by staff on a case-by-case basis in the Williamsville Main Street over the last few years, it is anticipated that establishing such a minimum and maximum will save staff and applicants negotiation time and associated costs as a result of the clarity provided, and will also ensure that the parking provided on individual properties is both sufficient to meet the anticipated demand and also forward thinking to ensure that parking is not over-supplied to the detriment of active transportation, transit, climate change, affordable housing and many other important policies and strategic priorities identified throughout this Report.

Given that staff do not anticipate that many projects will take full advantage of the parking minimum and most will provide somewhere mid-range between the minimum and maximum, and further given the opportunities for walking, biking and public transit-riding that exist in the corridor, staff do not expect local parking issues or problems to arise in the context of either individual or cumulative projects. However, as part of the reduced residential parking changes, staff will observe and monitor the situation and will advise Council if parking-related issues arise and, if necessary, in advance of the completion of the new zoning by-law, may bring adjustments to the parking approach if



## **Addendum to the Williamsville Main Street Study (November 5, 2020)**

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deemed necessary by staff or directed by Council. Staff are not planning any public parking policy changes to support these on-site parking requirements and would not recommend changes to support a specific application.

Note that if staff is found to have under-estimated the interest in low ratio parking buildings, that in and of itself would not be considered a “parking issue,” given that such a possibility is certainly anticipated and would not be cause for concern; only observable parking-related problems that exceed observed or anticipated public interest benefits would be considered cause for action or adjustment.

As an additional public interest aspiration, all parking that is constructed within the Williamsville Main Street will be encouraged to be designed and built in a manner that allows for flexible adaptation to other uses as parking space demand is reduced over time, noting that spaces can be removed or transformed when not needed given that the City may eventually move to remove the minimum parking requirement altogether, if it is found that the reduced minimum ratio is still too high, or if more flexibility is deemed publicly advantageous. The City will continue to investigate ways to support and facilitate such flexible design approaches, as learning from other cities and contexts grows over time.

Changes to parking ratios in the Williamsville area is not intended to directly impact the public parking supply for residential or commercial use. Accordingly, as part of these changes to the ratios no changes will be made to the public parking policies that are in place or public parking options that are available. More specifically:

- Parking requirements that remain for the site, such as accessible parking spaces, commercial parking, or bicycle parking are intended to remain within the site. The City will not accommodate these requirements in the public realm;
- The site-specific parking provisions being piloted are not intended to shift the priority of public parking within the transportation study that is underway. Public parking will not take priority over the pedestrian environment and transit requirements even if fewer private parking spaces are constructed.
- There are no committed plans to increase the off-street public parking supply within the Williamsville corridor. Applicants will not have access to expanded public parking and will need to consider that in their design.
- The existing on-street parking programs do not allow for long term residential parking for new, multi-unit residential sites. The maximum number of permits available to any property is 3 and there are no overnight winter parking provisions. The City will not bear the responsibility of residential parking to any greater degree than is already accommodated in the neighbourhood.

### **9.7.3 Permitted Uses**

Although not outlined in the interim control by-law, staff have noted through the implementation of the C4 Zone for the Williamsville Main Street since 2013 that permitted uses in Section 23C.2 of Zoning By-Law Number 8499 need to be updated. A full list of the proposed changes has been included in Appendix E to this Addendum, but essentially includes the following:

- Removing references to out-of-date uses/terms; and,
- Including some new permitted uses that are in keeping with the area, such as clinics and offices

Staff recommend the deletion and addition of specific permitted uses in the C4 Zone in Zoning By-Law Number 8499 for the Williamsville Main Street, as outlined in Appendix E to this document.

Staff are also proposing changes to various provisions of the zoning by-law to reflect the built form elements discussed in this addendum, and changes to clarify that accessory structures are to be constructed in accordance with the general provisions of Section 5 of Zoning By-Law Number 8499.

### **9.7.4 Heritage and Character**

With respect to cultural heritage resources and character along the Williamsville Main Street, staff recommend the following:

1. Maintain the protection of important cultural heritage resources in the Corridor.
2. Continue to identify and protect heritage resources adjacent to the Williamsville corridor, focusing on the side streets.
3. Remove references to the Character Areas from the Official Plan, but maintain the framework in the Study.
4. Continue to define the heritage and neighbourhood character of the area as it evolves, with a focus on a livable, walkable environment.

### **9.7.5 Balconies**

As part of the revisions to the zoning, staff discussed the inclusion and design of balconies in the main street area. The review included: differences in provisions that might be needed for balconies on the front of buildings versus the rear; the depth of balconies (interior depth versus projection); concerns about the design of balconies negatively impacting the massing of a building; and, the need to ensure useable amenity space. Staff recognize that there have been concerns raised about balconies at the rear of buildings potentially over-looking existing residential areas, but the provision of this outdoor amenity area is an important component in successfully integrating higher density residential development in a main street setting. For the purposes of the

revisions to the C4 Zone, balconies that project out from the face of a building will be permitted above the fourth floor of building facing a street to a maximum depth of 1.5 metres, and balconies facing a lot line that is not a street, will be permitted above the second storey to a maximum depth of 2.0 metres. Staff will monitor the length and area of balconies of future development proposals to see if they are impacting the intent of the built form for the area, and will recommend additional regulations in the future, if needed.

#### **9.7.6 Mechanical Penthouses, Green Roofs & Other Rooftop Elements**

Mechanical penthouses and other rooftop mechanical equipment are permitted to exceed maximum height limits by 3.5 metres. Additional provisions have been added to control the area of these units and how far they are set back from the edge of a roof. Additional provisions have also been added to all architectural appurtenances that support green roofs (e.g. garden sheds, shade structures), other rooftop sustainability elements (e.g. solar panels), or rooftop amenity spaces are permitted to exceed the maximum allowable building height by 3.5 metres.

## **10. Conclusion**

After identifying and considering various options relating to the many elements of planning and design regulation as issue in the Corridor, Staff assessed the various options against the previously discussed “4 Definitions of Success.’ The following observations were made:

- Maintaining an angular plane approach would undermine/weaken definitions 2-4 as follows:
  - it would make the achievement of various Council directives relating to address the Climate Emergency and supporting housing affordability more difficult;
  - it would continue the current complex and difficult to understand procedures for staff and applicants alike; and
  - it would make the achievement of “green lit” (i.e. allowing development to proceed easily) projects in the short term more difficult. It is further recognized that the type of building form most applicable to angle of daylight provisions (large, long, 10-storey buildings as seen in previous applications) would no longer be permitted in the new system.
- Establishing the majority of the corridor as 6 storey scale buildings supports definition 1 as it reflects the original intent of the study, without undermining definitions 2-4 if combined with limited and strategically located “book end” opportunities for taller, denser buildings in locations that do not further impact the

prevailing 6 storey scale. It is further noted that the density achieved through such an approach is in keeping with that anticipated in the corridor from a smart growth and ultimate corridor capacity perspective.

- For the taller building approach at each end of the corridor, larger block-long areas for multiple taller buildings were considered given the ownership patterns and existing uses in the blocks in question. Such long blocks of tall towers however provided more density/housing supply along the corridor than needed or considered supportable relative to infrastructure capacity & other issues, and significantly undermined “definition of success” number 1 in that the prevailing scale of the corridor would eventually reflect mostly very tall buildings of either 10 storeys (the previously approved projects) or even higher.
- Alternatively, a taller building approach just at the specific “hub” intersections north & south at the corners of Princess Street and Division Street for a specific number of taller, slimmer buildings that mark the corner, would provide sufficient and strategic additional housing in logical/appropriate locations, while maintaining the majority of the corridor for mid-rise scale, thus supporting all 4 definitions of success.



## **Appendices**

Appendix A – Transportation Report

Appendix B – Servicing Memo from Utilities Kingston dated July 23, 2020

Appendix C – Feasibility Assessment – Purpose-Built Rental Apartment Development for Williamsville

Appendix D – Proposed Changes to the Official Plan (track changes document)

Appendix E – Proposed Changes to Zoning By-Law Number 8499 (track changes document)

Appendix F – Excerpts from the Williamsville Corridor Computer Model

Appendix G – WMSS Workshop Feedback and Summary (February 12, 2020)

Appendix H Transcript from Online Public Engagement Event with Watson and Associates Regarding the Economic Feasibility Report

Appendix I Boundary Adjustments

Appendix J Servicing Memo Regarding Fire Flows from Utilities Kingston dated October 5, 2020

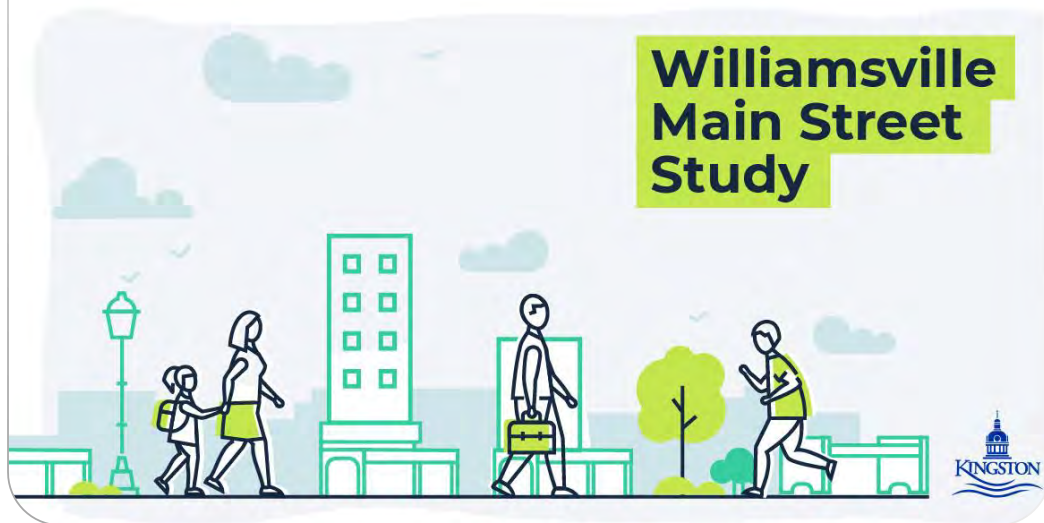


City of Kingston

# Williamsville Transportation Plan

Operational Needs Analysis

April 2020 - 19-9291



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## 1.0 Introduction

The purpose of this memorandum is to document the results of the operational transportation network assessment undertaken for the Williamsville area.

Dillon Consulting Limited (Dillon) was retained by the City of Kingston to undertake an operational assessment of the Williamsville area for the 2036 horizon. The goal of the assessment was to review the road network's existing performance and assess how the road network may perform under two future land use/development scenarios. This also included consideration of alternate mode share scenarios for trip generations of future new development within the neighbourhood. The future land use scenarios are discussed further in Section 4.0.

The following sections describe the study area, analysis parameters, results, conclusions, and next steps.

## 2.0 Study Area

---

The focus of the study was on the main transportation corridors in Williamsville:

- Princess Street between Bath Road / Concession Street and Division Street;
- Concession Street between Princess Street and Division Street; and,
- Division Street between Concession Street / Stephen Street and Princess Street.

Williamsville contains a mix of residential, commercial and office land uses. The majority of the commercial land uses and high density residential land uses are located on Princess Street.

## 3.0 Methodology

### 3.1 Transportation Demands

City staff provided 2036 population and employment forecasts for the C.M.A. and for Williamsville specifically, based on two potential development scenarios within the Princess Street corridor: approved and active development, and ultimate development.

These population and employment forecasts were added to the C.M.A.<sup>1</sup> transportation demand model (VISUM) and used to estimate the future traffic volumes through Williamsville at the transportation corridor level.

The C.M.A.<sup>1</sup> transportation model is intended for strategic corridor-level analysis. To provide for more detailed intersection-level analysis, traffic generated by the proposed Williamsville developments was distributed to the road network manually outside of the C.M.A. model<sup>1</sup>.

### 3.2 Operational Assessment

The operational analysis applied PTV Group's VISSIM microsimulation software, which is the industry-leading software for transportation microsimulation. Microsimulation involves simulating the behaviour of individual cars, buses, and pedestrians on a simulated transportation network. The model is used to assess the impact to motor vehicles in terms of delays, queuing, and travel time.

Cars in the model are given an origin and destination and are allowed to find their own routes through the simulated road network. The route finding process is iterative and allows vehicles to react and adapt to congestion in the model. This iterative route finding process allows the model to accurately assess future conditions.

Before testing future conditions, it was necessary to construct a model that replicated existing conditions. This step allows the model to better assess future conditions. Calibration involves adjustments to the transportation demands in the model and other parameters to match the travel patterns, travel times, and vehicle behaviour.

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<sup>1</sup> Formerly referred to as the 'City-Wide model'

## 4.0 Study Foundations

The following sections document the population, employment, road network, and public transit assumptions that were used for the analysis.

### 4.1 Williamsville Growth

City staff provided population and employment projections for various 'blocks' in the study area for the 2036 horizon.

**Figure 1** illustrates the location of the development blocks and the assumed location of vehicle driveways for each block.

#### 4.1.1 Williamsville Population and Employment

**Table 1** summarizes the population and employment for each block in the study area. There are two development levels that are being evaluated:

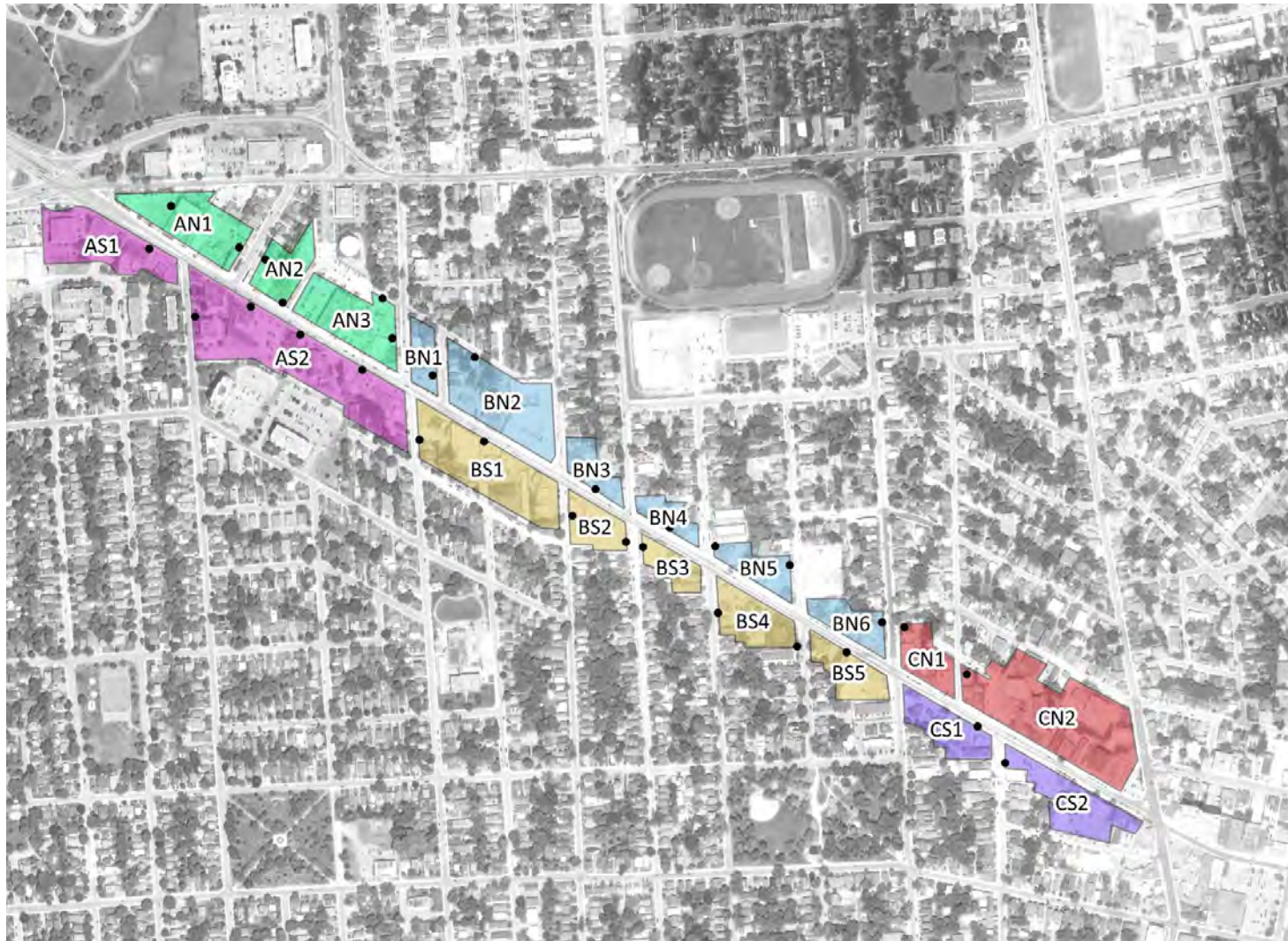
1. Approved & active development level; and,
2. Ultimate development level.

The following abbreviations are used for the table below and the rest of the document:

- Ex. for existing
- Units for residential dwelling units
- Appr. for approved and active development scenario
- Ult. for ultimate development scenario.



Figure 1: Williamsville Blocks and Assumed Vehicle Driveway Locations



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**Table 1: Residential Dwellings, Population, and Employment by Block**

Block	Ex. Units	Ex. People	Ex. Jobs	Appr. Units	Appr. People	Appr. Jobs	Ult. Units	Ult. People	Ult. Jobs
AN1	0	0	12	0	0	12	300	690	107
AN2	2	5	78	2	5	78	52	120	94
AN3	7	16	156	7	16	156	207	476	219
AS1	1	2	71	1	2	71	901	2,072	356
AS2	59	136	109	174	400	139	264	607	168
BN1	12	28	18	12	28	18	72	166	37
BN2	88	202	15	233	536	41	273	628	54
BN3	1	2	26	1	2	26	131	301	66
BN4	5	12	33	5	12	33	115	265	68
BN5	6	14	4	608	1,398	53	608	1,398	53
BN6	13	30	33	184	423	62	234	538	78
BS1	83	191	35	177	407	35	227	522	51
BS2	7	16	0	332	764	34	332	764	34
BS3	0	0	7	31	71	26	91	209	45
BS4	18	41	27	18	41	27	118	271	59
BS5	7	16	21	7	16	21	47	108	34
CN1	11	25	18	312	718	66	372	856	85
CN2	104	239	81	299	688	101	949	2,183	306
CS1	14	32	31	14	32	31	94	216	56
CS2	18	41	56	222	511	108	252	580	118
<b>Growth</b>				<b>+2,183</b>	<b>+5,021</b>	<b>+307</b>	<b>+5,183</b>	<b>+11,921</b>	<b>+1,257</b>
<b>Total</b>	<b>456</b>	<b>1,049</b>	<b>831</b>	<b>2,639</b>	<b>6,070</b>	<b>1,138</b>	<b>5,639</b>	<b>12,970</b>	<b>2,088</b>

Growth in the above table is compared to existing.

4.1.2 Trip Generation - Person

**Table 2** lists the person trip generation rate, number of people and jobs, and the total person trip generation for the future development scenarios. The residential trip generation rate is consistent with the observed trip generation rates at 117 Park Street<sup>2</sup>. It is worth noting that the P.M. rate is 2.6x the A.M. rate and therefore the P.M. peak hour is very likely to govern the analysis.

Given the uncertainty with the type of employment, the employment trip generation rate was set to 0.6 trips per job, which assumes that 60% of employees will travel during the peak hour. This is reasonable and conservative for this analysis.

**Table 2: Williamsville Trip Generation - Persons**

	A.M. Peak Outbound	A.M. Peak Inbound	P.M. Peak Outbound	P.M. Peak Inbound
Trip generation rate per residential dwelling unit	0.24			0.63
Trip generation rate per job		0.6	0.6	
Person Trips - Approved +2,183 dwelling units +307 jobs	524	184	184	1,375
Person Trips - Ultimate +5,183 dwelling units +1,257 jobs	1,244	754	754	3,265

4.1.3 Trip Generation - Vehicles

The Williamsville area is very close to downtown Kingston and Queen’s University and therefore the number of vehicle trips generated by the proposed residential developments is anticipated to be relatively low. It should be noted that a lower vehicle mode share means the new development within Williamsville will have less impact on the road network than may be expected.

<sup>2</sup> City of Kingston Princess Street Corridor and Residential Area of Williamsville Neighbour Traffic Impact Study (September 12, 2018), Table 3.3.

Two mode share scenarios were developed to assess the impact of the mode share assumption on the study area road network:

1. The first mode share scenario was based on previous studies of existing residential developments within the Princess Street corridor which showed an auto mode share of 22%; and,
2. The second mode share scenario was 35% auto mode share, which was based on the preliminary mode share results for Williamsville from the City’s 2019 household travel survey.

It should be noted that these residential auto mode shares, including observations from existing residential land uses along the Princess Street corridor, are significantly lower than the City-wide 2034 target of 65% auto mode share. The employment auto mode share was held constant at 60%. The proximity to downtown is anticipated to influence the employment auto mode share slightly but not to the same extent to which it influences the residential auto mode share.

**Table 3** summarizes the vehicle trip generation for the Approved and Ultimate land uses for the two auto mode share scenarios. The following abbreviations are used:

- M.S. for mode share
- Res. for residential and Emp. for Employment
- I.B. for inbound and O.B. for outbound

**Table 3: Williamsville Trip Generation - Vehicles**

<b>Trip Type</b>	<b>Land Use</b>	<b>Res. M.S.</b>	<b>Emp. M.S.</b>	<b>A.M. Peak O.B.</b>	<b>A.M. Peak I.B.</b>	<b>P.M. Peak O.B.</b>	<b>P.M. Peak I.B.</b>
Person	Appr.	N/A	N/A	524	184	184	1,375
Person	Ult.	N/A	N/A	1,244	754	754	3,265
Auto	Appr.	22%	60%	115	111	111	303
Auto	Appr.	35%	60%	183	111	111	481
Auto	Ult.	22%	60%	274	453	453	718
Auto	Ult.	35%	60%	435	453	453	1,143

**Table 4** and **Table 5** summarize the trip generation by block for the two mode share scenarios. The 22%/35% values designate the applied auto mode share.

**Table 4: Williamsville Trip Generation by Block - Vehicles – AM Peak Hour**

Block	Appr.	Appr.	Appr.	Appr.	Ult.	Ult.	Ult.	Ult.
	22% O.B.	22% I.B.	35% O.B.	35% I.B.	22% O.B.	22% I.B.	35% O.B.	35% I.B.
AN1	0	0	0	0	16	34	25	34
AN2	0	0	0	0	3	6	4	6
AN3	0	0	0	0	11	23	17	23
AS1	0	0	0	0	48	103	76	103
AS2	6	11	10	11	11	21	17	21
BN1	0	0	0	0	3	7	5	7
BN2	8	9	12	9	10	14	16	14
BN3	0	0	0	0	7	14	11	14
BN4	0	0	0	0	6	13	9	13
BN5	32	18	51	18	32	18	51	18
BN6	9	10	14	10	12	16	19	16
BS1	5	0	8	0	8	6	12	6
BS2	17	12	27	12	17	12	27	12
BS3	2	7	3	7	5	14	8	14
BS4	0	0	0	0	5	12	8	12
BS5	0	0	0	0	2	5	3	5
CN1	16	17	25	17	19	24	30	24
CN2	10	7	16	7	45	81	71	81
CS1	0	0	0	0	4	9	7	9
CS2	11	19	17	19	12	22	20	22
<b>Total</b>	<b>115</b>	<b>111</b>	<b>183</b>	<b>111</b>	<b>274</b>	<b>453</b>	<b>435</b>	<b>453</b>

**Table 5: Williamsville Trip Generation by Block - Vehicles – PM Peak Hour**

Block	Appr.	Appr.	Appr.	Appr.	Ult.	Ult.	Ult.	Ult.
	22% O.B.	22% I.B.	35% O.B.	35% I.B.	22% O.B.	22% I.B.	35% O.B.	35% I.B.
AN1	0	0	0	0	34	42	34	66
AN2	0	0	0	0	6	7	6	11
AN3	0	0	0	0	23	28	23	44
AS1	0	0	0	0	103	125	103	198
AS2	11	16	11	25	21	28	21	45
BN1	0	0	0	0	7	8	7	13
BN2	9	20	9	32	14	26	14	41
BN3	0	0	0	0	14	18	14	29
BN4	0	0	0	0	13	15	13	24
BN5	18	83	18	133	18	83	18	133
BN6	10	24	10	38	16	31	16	49
BS1	0	13	0	21	6	20	6	32
BS2	12	45	12	72	12	45	12	72
BS3	7	4	7	7	14	13	14	20
BS4	0	0	0	0	12	14	12	22
BS5	0	0	0	0	5	6	5	9
CN1	17	42	17	66	24	50	24	80
CN2	7	27	7	43	81	117	81	186
CS1	0	0	0	0	9	11	9	18
CS2	19	28	19	45	22	32	22	52
<b>Total</b>	<b>111</b>	<b>303</b>	<b>111</b>	<b>481</b>	<b>453</b>	<b>718</b>	<b>453</b>	<b>1,143</b>

4.1.4

**Trip Distribution - Vehicles**

Traffic generated by the Williamsville development was manually distributed to the local road network using a cardinal distribution.

**Table 6** summarizes the trip distribution used for the analysis. The distribution was based on the location of employment and residential land uses relative to the Williamsville area.

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**Table 6: Williamsville Trip Distribution - Vehicles**

<b>Cardinal Direction</b>	<b>Percent</b>	<b>Gateways in Study Area</b>
North	30%	Division Street N, Princess Street N/W
East	20%	Stephen Street, Princess Street S/E
South	20%	Division Street S, Princess Street S/E
West	30%	Concession Street W, Princess Street N/W
<b>Total</b>	<b>100%</b>	

**4.1.5 Trip Assignment - Vehicles**

Traffic generated by the Williamsville development was added to the microsimulation model and the model was used to assign traffic to the transportation network. The microsimulation model uses an iterative process to determine the quickest path from the origin to the destination for each vehicle trip.

This assignment method was used because it allows vehicles to adapt to changing conditions and avoid congestion, as drivers do in real life. Williamsville has a grid-like road network and therefore it is anticipated that vehicles will use Collector and Local roads to avoid congestion on Arterial roads such as Princess Street, Division Street, and Concession Street. The amount to which this occurs will be quantified during the operational assessment.

**4.2 Other Growth in Kingston**

The growth occurring in Williamsville is anticipated to represent approximately 20% of the total population growth in Kingston between 2020 and 2036. The C.M.A. transportation demand model<sup>3</sup> was used to estimate the transportation impact of the other 80% of population growth outside Williamsville.

The transportation demand model uses population and employment data and mode share assumptions to estimate the number of vehicle trips generated in the future.

<sup>3</sup> Formerly called the 'City-Wide' model



4.2.1 C.M.A. Population and Employment

**Table 7** summarizes the C.M.A. population and employment assumptions for four (4) land use scenarios. All scenarios include the student population.

The first land use scenario is the existing conditions scenario which was calibrated to existing traffic volumes. The second land use scenario is the forecasted population and employment based on the approved and active developments; this matches the C.M.A. population and employment projections<sup>4</sup>.

The third land use scenario is the “Ultimate Williamsville Land Use scenario” which exceeds the City’s population and employment projections. The additional growth is all located in Williamsville for this scenario.

The fourth land use scenario includes all approved C.M.A. growth except for growth in Williamsville. The growth in Williamsville was accounted for explicitly (as described in the previous section) and therefore the growth in Williamsville was removed from the C.M.A. model<sup>5</sup> to avoid double-counting for the operational assessment.

This fourth scenario shows that **without the Williamsville growth**, vehicle trips within and **through Williamsville itself** are only anticipated to increase by 2% total between 2020 and 2036. This shows that growth in other areas of Kingston do not significantly increase traffic volumes on Princess Street, Concession Street, or Division Street. This is likely due to a combination of factors such as:

- the three largest projected population growth areas are located northwest of Williamsville (along Princess Street) and east of Williamsville (North King’s Town);
- these growth areas are anticipated to have good transit, walking, and cycling facilities and therefore the auto mode share will be lower and the vehicle trips generated by these developments will be lower;
- a large portion of the employment growth occurs north and west of Williamsville and therefore it does not travel through Williamsville; and,

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<sup>4</sup> Figure 4-3 and Figure 6-1 from the *Population, Housing, and Employment Growth Forecast, 2016 to 2046, City of Kingston, Final Report (Watson & Associates Economists Ltd., March 5, 2019)*

<sup>5</sup> Formerly called the ‘City-Wide’ model

- the grid network in near the study area, which allows vehicles to use other routes if there is congestion on major roadways.

**Table 7: C.M.A Population and Employment, and Williamsville Vehicle Trips**

Land Use Scenario	C.M.A. Population	C.M.A. Employment	Williamsville Vehicle Trips
1.2016 Model Base	194,500	83,315	7,873
2.2036 Approved	220,208	92,201	8,410
3.2036 Approved + 'Ultimate' W.M.V. Growth	227,108	93,151	9,056
<b>4.2036 Approved without any W.M.V. Growth</b>	<b>215,187</b>	<b>91,816</b>	<b>7,993</b>

**Table 8** summarizes the population change that was assumed for this analysis. **Figure 2** and **Figure 3**, respectively, illustrate the location of population and employment change areas and the amount of change for the Approved scenario.

**Table 8: C.M.A. Population Change**

Area	Approved Pop. Change	Approved Pop. Change	Ult. Pop Change
N.K.T.	15.0%	3,585	3,585
Williamsville	20.9%	5,020	<b>11,921 (+6,901)</b>
1	1.2%	286	286
2	0.6%	143	143
3	15.0%	3,579	3,579
4	3.3%	787	787
5	12.3%	2,935	2,935
6	14.8%	3,531	3,531
7	2.7%	644	644
8	5.2%	1,241	1,241
9	0.5%	119	119
10	1.5%	358	358
11	0.6%	143	143
12	5.0%	1,193	1,193
13	1.4%	334	334
<b>Total</b>	<b>100%</b>	<b>23,900</b>	<b>30,801</b>

Figure 2: C.M.A. Population Change (Approved Scenario)

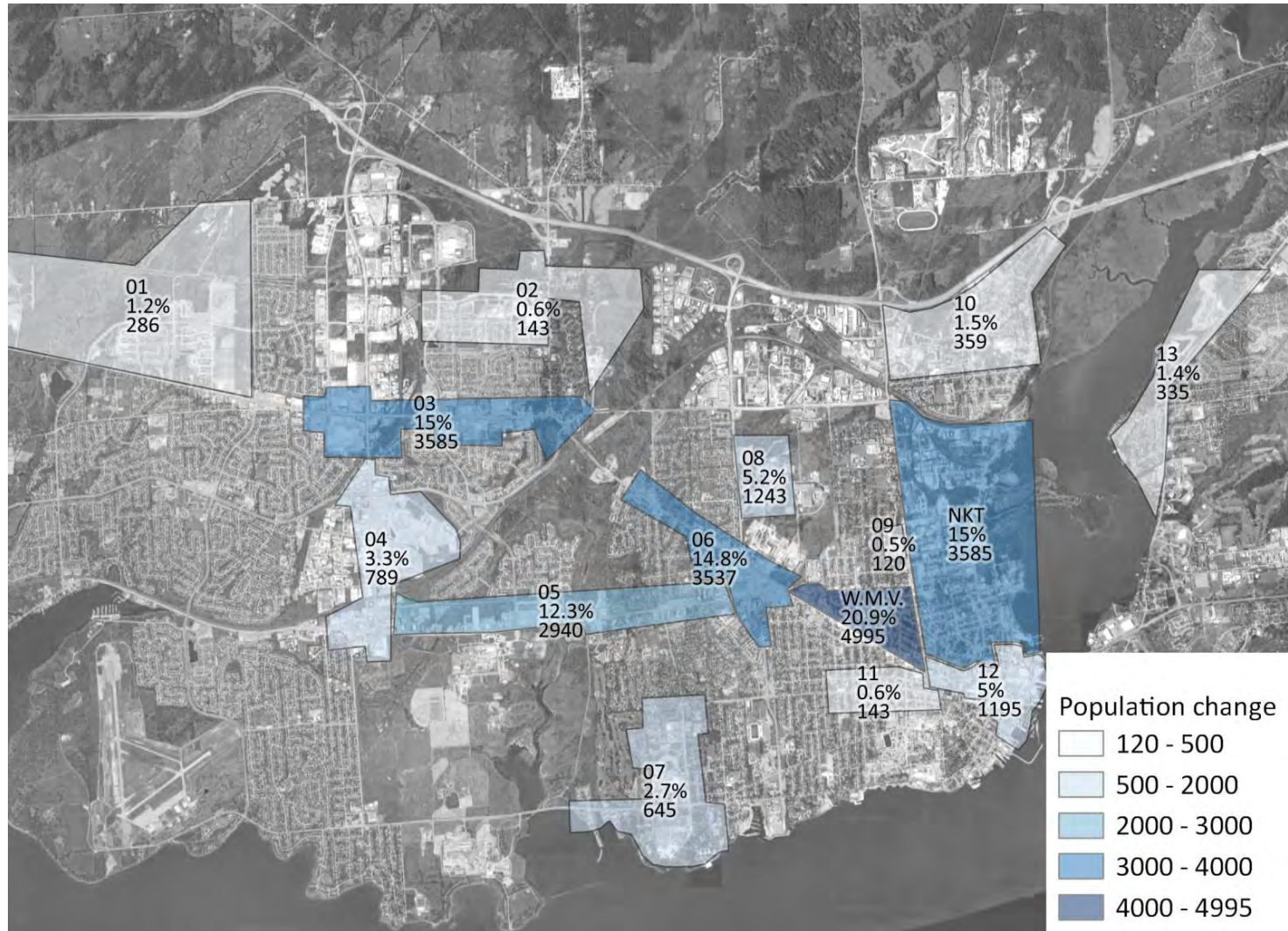
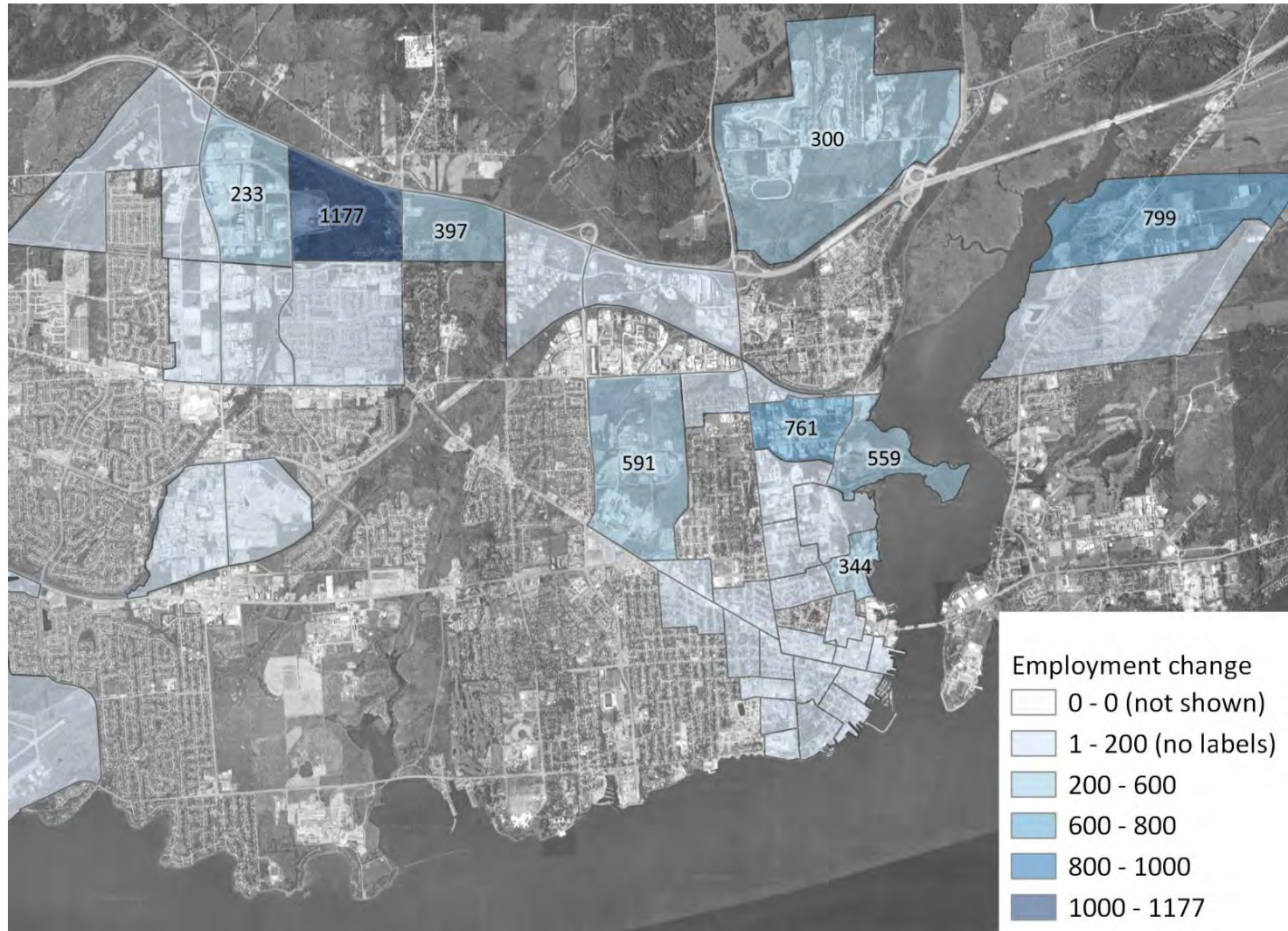




Figure 3: C.M.A. Employment Change (Approved Scenario)



4.2.2 Mode Share

The C.M.A. model<sup>6</sup> includes assumptions from the City of Kingston *Transportation Master Plan* (2015), which recommended a 2034 target of 9% transit trips, 17% active transportation, and 5% reduction from Transportation Demand Management (T.D.M.) for the 2034 horizon. These targets were referred to as the “Base” mode share.

For the analysis in this report, more aggressive targets were applied, as directed by City of Kingston council on December 1, 2015. These are referred to as the “Reduced” demand scenario and targeted 15% transit usage, 20% active transportation, and 5% T.D.M. “Reduced” refers to the reduction of auto trips on the network through increased use of sustainable travel modes.

**Table 9** lists the C.M.A. model<sup>6</sup> mode share targets. The reduced mode share results in transit trips increasing from 9% to 15%, and an increase in active transportation trips from 17% to 20%, when compared to the base demand mode share.

**Table 9: C.M.A. Model Mode Share Targets**

Mode	2008 Household Travel Survey	2036 Base Mode Share	2036 Reduced Mode Share
Auto	81%	74%	65%
Transit	5%	9%	15%
Active Transportation	14%	17%	20%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

4.2.3 Trip Distribution and Assignment

The vehicle trips resulting from population and employment growth were distributed to different areas within the model based on the location of new residential developments and employment locations. The model assigned these new vehicle trips to the road

<sup>6</sup> Formerly called the ‘City-Wide’ model

network through an iterative process of trial and error to reduce the overall delay to all road users. This is similar to how people select routes in reality.

### 4.3 Transportation Network Changes

#### 4.3.1 Road Network

Within the study area itself, Division Street and Princess Street are identified for corridor optimization.

The assessment assumed that the following transportation projects would be implemented by the 2036 horizon, as per the K.T.M.P.:

1. Third Crossing bridge across the Cataraqui River;
2. J.C.B. widening between Division Street and Elliott Avenue;
3. J.C.B. widening between Portsmouth Avenue and Princess Street; and,
4. Leroy Grant Drive extension from Concession Street to Elliott Avenue / J.C.B.

The importance of these transportation projects as they relate to the Approved and Ultimate land uses will be considered in future modelling.

#### 4.3.2 Public Transit

Princess Street is the main transit corridor in the City and there has been some consideration for transit priority lanes on Princess Street. This may prove a challenge in the future since Princess Street has a relatively narrow right-of-way of approximately 20 metres.

#### 4.3.3 Active Transportation

**Figure 4** illustrates the existing and planned active transportation network within the study area.

Princess Street is currently a designated spine cycling route. Concession Street and Division Street are identified as proposed spine cycling routes.

MacDonnell Street, Albert Street, Alfred Street, University Avenue, and York Street are identified as proposed neighbourhood cycling routes.



Figure 4: Planned Active Transportation Network



Source: City of Kingston Active Transportation Master Plan, “Walk ‘n’ Roll Kingston” – Technical Appendix G – Neighbourhood Focus - Area G (June 2018)

## 5.0 Operational Assessment

An operational assessment was completed using transportation microsimulation software to evaluate:

1. the capacity of the Williamsville transportation network;
2. the impact on travel times through the study area;
3. the potential for vehicles to infiltrate residential areas; and,
4. the impact on intersection operations.

Before conducting the operational assessment it was necessary to calibrate the microsimulation model.

### 5.1 Calibration

Model calibration was performed to ensure the transportation demands are correct and that the model accurately represents the travel patterns and traveller behaviours that occur in reality.

A set of calibration standards were employed to measure the accuracy of the model. The standards used in this analysis are based on FHWA's *Traffic Analysis Toolbox Volume III: Guidelines for Applying Traffic Microsimulation Models*, and include a set of statistical tests to verify the validity of the model results in comparison to observed field data.

**Table 10** presents the FHWA Calibration standards.

The model was also calibrated for travel time through the major corridors. The Google Distance Matrix Application Programming Interface (API) was queried to determine real-world travel times; it is crowd-sourced from mobile phones running Google Maps and uses historical averages which represent hundreds of measurements. It was used as it allowed a much larger sample size than would otherwise be possible.

**Table 11** compares the target observed travel time against the modelled travel times. All modelled travel times are within 15% or within 60 seconds otherwise. This demonstrates that the model is well calibrated in terms of travel times.



**Table 10: FHWA Calibration Standards**

Criteria and Measures	Calibration Acceptance Targets
<b>Hourly Flows, Model Versus Observed</b>	
Individual Link Flows	
Within 15%, for 700 veh/h < Flow < 2700 veh/h	> 85% of cases
Within 100 veh/h, for Flow < 700 veh/h	> 85% of cases
Within 400 veh/h, for Flow > 2700 veh/h	> 85% of cases
Sum of All Link Flows	Within 5% of sum of all link counts
GEH Statistic < 5 for Individual Link Flows*	> 85% of cases
GEH Statistic for Sum of All Link Flows	GEH < 4 for sum of all link counts
<b>Travel Times, Model Versus Observed</b>	
Journey Times, Network	
Within 15% (or 1 min, if higher)	> 85% of cases
<b>Visual Audits</b>	
Individual Link Speeds	
Visually Acceptable Speed-Flow Relationship	To analyst's satisfaction
Bottlenecks	
Visually Acceptable Queuing	To analyst's satisfaction

\*The GEH statistic is computed as follows:

$$GEH = \sqrt{\frac{(E - V)^2}{(E + V) / 2}} \quad (4)$$

where:

E = model estimated volume

V = field count

Source: "Freeway System Operational Assessment," *Paramics Calibration and Validation Guidelines (Draft)*, Technical Report I-33, Wisconsin DOT, District 2, June 2002.

**Table 11: Model Calibration – Travel Times**

Scenario	Princess St. E.B.	Princess St. W.B.	Concession St. E.B.	Concession St. W.B.	Division St.	Division St. S.B.
A.M. Obs.	5:30	4:30	3:15	3:15	2:30	2:45
A.M. Model	5:00	5:15	4:00	3:45	2:45	2:30
A.M. Diff.	30s	45s	45s	30s	15s	15s
A.M. Diff. %	9%	17%	23%	15%	10%	9%
P.M. Obs.	6:30	5:30	3:45	4:00	3:15	3:00
P.M. Model	5:45	5:00	4:45	5:00	2:45	3:00
P.M. Diff.	45s	30s	60s	60s	30s	0s
P.M. Diff. %	12%	9%	27%	25%	15%	0%

**Table 12** and **Table 13** summarize the model calibration results for intersection volumes. The calibration was checked for turns (at intersections) and links (between intersections). The results show the model is within a reasonable calibration range.

In many cases there are only one or two turns or links for a particular criteria which are below the targets (e.g. 14/17 or 4/5). The overall volumes during the AM peak hour are higher than the counted volumes; however, this is conservative and therefore it is not considered an issue.

Overall, the model is suitably calibrated for assessing the impacts of the proposed Williamsville developments.

**Table 12: Model Calibration – Turns and Link Volumes - Weekday AM Peak**

<b>Turns</b>		<b>Passed 4 of 6</b>							
<b>Criteria</b>	<b>Flow Range</b>		<b>Criteria</b>		<b>Goal</b>	<b>Current</b>	<b>Count</b>	<b>Model</b>	<b>Pass</b>
Within 75 veh/h, for Flow < 400 veh/h > 85% of cases	0	400	75	veh	85%	97%	144	139	✓
Within 0.2%, for 400 veh/h < Flow < 1200 > 85% of cases	400	1,200	20%	%	85%	82%	17	14	✗
Within 300 veh/h, for Flow > 1200 veh/h > 85% of cases	1,200		300	veh	85%	--	0	0	
Sum of all flows within 0.05% of sum of all counts	Overall		5%	%	5%	4%	19,200	20,021	✓
GEH < 5 for individual flows > 85% of cases	Overall		5	GEH	85%	89%	161	144	✓
GEH < 10 for individual flows, 95% of cases	Overall		10	GEH	95%	100%	161	161	✓
GEH < 4 for sum of all counts	Overall		4	GEH	4.0	5.9	19,200	20,021	✗

<b>Links</b>		<b>Passed 4 of 6</b>							
<b>Criteria</b>	<b>Flow Range</b>		<b>Criteria</b>		<b>Goal</b>	<b>Current</b>	<b>Count</b>	<b>Model</b>	<b>Pass</b>
Within 100 veh/h, for Flow < 700 veh/h > 85% of cases	0	700	100	veh	85%	95%	56	53	✓
Within 0.15%, for 700 veh/h < Flow < 2700 > 85% of cases	700	2,700	15%	%	85%	80%	5	4	✗
Within 400 veh/h, for Flow > 2700 veh/h > 85% of cases	2,700		400	veh	85%	--	0	0	
Sum of all flows within 5% of sum of all counts	Overall		5	%	5%	4%	19,200	20,021	✓
GEH < 5 for individual flows > 85% of cases	Overall		5	GEH	85%	85%	61	52	✓
GEH < 10 for individual flows, 95% of cases	Overall		10	GEH	95%	97%	61	59	✓
GEH < 4 for sum of all counts	Overall		4	GEH	4.0	5.9	19,200	20,021	✗

**Table 13: Model Calibration – Turns and Link Volumes - Weekday PM Peak**

<b>Turns</b>		<b>Passed 5 of 6</b>							
<b>Criteria</b>	<b>Flow Range</b>		<b>Criteria</b>		<b>Goal</b>	<b>Current</b>	<b>Count</b>	<b>Model</b>	<b>Pass</b>
Within 75 veh/h, for Flow < 400 veh/h > 85% of cases	0	400	75	veh	85%	96%	135	129	✓
Within 0.2%, for 400 veh/h < Flow < 1200 > 85% of cases	400	1,200	20%	%	85%	83%	29	24	✗
Within 300 veh/h, for Flow > 1200 veh/h > 85% of cases	1,200		300	veh	85%	--	0	0	
Sum of all flows within 0.05% of sum of all counts	Overall		5%	%	5%	1%	25,959	25,804	✓
GEH < 5 for individual flows > 85% of cases	Overall		5	GEH	85%	86%	164	141	✓
GEH < 10 for individual flows, 95% of cases	Overall		10	GEH	95%	98%	164	161	✓
GEH < 4 for sum of all counts	Overall		4	GEH	4.0	1.0	25,959	25,804	✓

<b>Links</b>		<b>Passed 5 of 6</b>							
<b>Criteria</b>	<b>Flow Range</b>		<b>Criteria</b>		<b>Goal</b>	<b>Current</b>	<b>Count</b>	<b>Model</b>	<b>Pass</b>
Within 100 veh/h, for Flow < 700 veh/h > 85% of cases	0	700	100	veh	85%	90%	50	45	✓
Within 0.15%, for 700 veh/h < Flow < 2700 > 85% of cases	700	2,700	15%	%	85%	73%	11	8	✗
Within 400 veh/h, for Flow > 2700 veh/h > 85% of cases	2,700		400	veh	85%	--	0	0	
Sum of all flows within 5% of sum of all counts	Overall		5	%	5%	1%	25,959	25,804	✓
GEH < 5 for individual flows > 85% of cases	Overall		5	GEH	85%	85%	61	52	✓
GEH < 10 for individual flows, 95% of cases	Overall		10	GEH	95%	98%	61	60	✓
GEH < 4 for sum of all counts	Overall		4	GEH	4.0	1.0	25,959	25,804	✓

**5.2 Results**

The analysis was performed using a combination of performance metrics including: overall network capacity, travel time measurements, vehicle-kilometers travelled (VKT), and intersection-level delay, queues, and level-of-service (LOS). The use of multiple performance metrics allows for a better understanding of what is happening and why it is happening.

5.2.1 Network Capacity

**Table 14** summarizes the overall network capacity results for the ‘no mitigation’ scenario. The operational model is for a relatively small area. Unmet demand refers to vehicles that could not “enter” the model due to congestion in the model.

These results show that the Williamsville transportation network is able to accommodate the future demands for all scenarios except the Ultimate development PM peak hour scenario. This scenario shows a reduction in the percentage of trips completed (93-95%), a reduction in the average speed (16-18 km/h), and an increase of the trips in progress (426-539).

**Table 14: Network Capacity - No Mitigation**

Scenario	Total Demand	Trips Completed	Trips in Progress	Unmet Demand	Average Speed	Trips Completed
AM 2019 Ex.	6,151	5,990	161	0	28	97%
AM 2036 No WMV Growth	6,274	6,084	162	0	28	97%
AM 2036 Appr. Auto 22%	6,387	6,220	167	0	28	97%
AM 2036 Appr. Auto 35%	6,489	6,318	171	0	27	97%
AM 2036 Ult. Auto 22%	7,071	6,881	190	0	27	97%
AM 2036 Ult. Auto 35%	7,484	7,285	199	0	26	97%
PM 2019 Ex.	9,015	8,775	240	0	25	97%
PM 2036 No WMV Growth	9,124	8,884	240	0	24	97%
PM 2036 Appr. Auto 22%	9,250	8,981	260	9	24	97%
PM 2036 Appr. Auto 35%	9,352	9,044	269	39	23	97%
PM 2036 Ult. Auto 22%	10,295	9,790	426	79	18	95%
PM 2036 Ult. Auto 35%	10,843	10,122	539	182	16	93%



5.2.2 Travel Times

Travel times provide an easy to understand measure which takes into account the combined impacts of several intersections and the impact on traffic progression through the corridor.

**Table 15** summarizes the travel time results for the ‘no mitigation’ scenario.

For the Approved land use, travel times are anticipated to increase by 30 seconds or less during both the AM and PM peak hours which is not significant.

For the Ultimate land use, travel times are anticipated to increase significantly during the PM peak hour for Princess Street eastbound, Concession Street eastbound, Concession Street westbound, and Division Street southbound.

The increases are from 6:45 to 8:15, 4:45 to 9:45, 5:00 to 8:30, and 3:00 to 6:30. These are increases of 3-5 minutes over a relatively short distance (2 km for Princess Street, 1.5 km for Concession Street, and 1 km for Division Street).

**Table 15: Travel Time Results – No Mitigation**

Scenario	Princess St. E.B.	Princess St. W.B.	Concession St. E.B.	Concession St. W.B.	Division St. N.B.	Division St. S.B.
AM 2019 Ex.	5:00	5:15	4:00	3:45	2:45	2:30
AM 2036 No WMV Growth	5:00	5:15	4:15	4:00	2:45	2:45
AM 2036 Appr. Auto 22%	5:00	5:15	4:00	3:45	2:45	2:45
AM 2036 Appr. Auto 35%	5:15	5:15	4:00	3:45	2:45	2:45
AM 2036 Ult. Auto 22%	5:15	5:30	4:15	4:15	2:45	2:45
AM 2036 Ult. Auto 35%	5:30	5:30	4:30	4:15	2:45	2:45
PM 2019 Ex.	5:45	5:00	4:45	5:00	2:45	3:00
PM 2036 No WMV Growth	6:15	5:00	5:00	4:45	2:45	2:45
PM 2036 Appr. Auto 22%	6:15	5:00	5:45	5:30	3:00	3:00
PM 2036 Appr. Auto 35%	6:15	5:00	5:45	5:30	3:00	3:00
PM 2036 Ult. Auto 22%	7:30	5:15	8:30	7:00	3:15	6:00
PM 2036 Ult. Auto 35%	8:15	5:45	9:45	8:30	3:30	6:30

5.2.3 Vehicle-Kilometres Travelled by Road Class

**Table 16** summarizes thousand-vehicle-kilometers-travelled (k.V.K.T.) by road class for the for the ‘no mitigation’ scenario.

The Arterials include Princess Street, Concession Street, Division Street, Leroy Grant Drive, Stephen Street; the Collectors include Alfred Street and Victoria Street, and the Local roads are all other roadways.

All scenarios and time periods show an increase in the amount of traffic on local roads. This is particularly true during the Ultimate PM peak hour scenario which shows Local traffic has increased 75% compared to Existing and 30% compared to the Approved scenario.

Some of this is due to the development being located on a local roadway, but some is due to traffic infiltration through residential areas to avoid congestion elsewhere. This is not surprising given that Williamsville has a grid network. Mitigating this will likely require a combination of turn prohibitions, traffic calming, and traffic signal optimization.

**Table 16: Results - V.K.T. by Road Class – No Mitigation**

Scenario	k.V.K.T. Arterial	k.V.K.T. Collector	k.V.K.T. Local	k.V.K.T. Total	% Art.	% Coll.	% Local
AM 2019 Ex.	3,800	400	400	4,600	83%	9%	9%
AM 2036 No WMV Growth	3,800	400	400	4,600	83%	9%	9%
AM 2036 Appr. Auto 22%	3,950	400	450	4,800	82%	8%	9%
AM 2036 Appr. Auto 35%	4,000	450	450	4,900	82%	9%	9%
AM 2036 Ult. Auto 22%	4,300	400	550	5,250	82%	8%	10%
AM 2036 Ult. Auto 35%	4,500	450	600	5,550	81%	8%	11%
PM 2019 Ex.	5,450	450	600	6,500	84%	7%	9%
PM 2036 No WMV Growth	5,500	450	600	6,550	84%	7%	9%
PM 2036 Appr. Auto 22%	5,500	450	800	6,750	81%	7%	12%
PM 2036 Appr. Auto 35%	5,550	450	800	6,800	82%	7%	12%
PM 2036 Ult. Auto 22%	5,850	550	1,050	7,450	79%	7%	14%
PM 2036 Ult. Auto 35%	6,000	600	1,100	7,700	78%	8%	14%

**City of Kingston**

#### 5.2.4 Intersection Performance

The scenarios were also compared in terms of intersection performance (delay, queues, and level of service) for study area intersections.

The Approved land use shows all intersections operating at LOS C or better. There are several turning movements operating at a LOS E or F, which shows there is room for improvement.

The Ultimate land use shows four intersections operating at LOS D or worse and the sum of the delays for all study area intersections is 100% higher than existing conditions and 50% higher than the approved land use during the PM peak hour.

This reinforces the findings from the previous sections which demonstrate that the Approved land use can be accommodated without significant issues, but without mitigation there is a lack of capacity for vehicle trips to accommodate the Ultimate land use during the PM peak hour.

**Appendix A** contains the detailed intersection performance worksheets, which list the number of vehicles, delay, level-of-service (LOS), 50<sup>th</sup> and 95<sup>th</sup> percentile queues for each turning movement and the overall intersection for study area intersections.

6.0

## Conclusion

Overall the study area roads appear capable of accommodating the additional traffic fairly well except for the Ultimate land use during the weekday PM peak hour. This conclusion is based on analysis without any optimization or mitigation in the Williamsville study area.

The ability of Williamsville to accommodate this growth is due largely to the low auto mode share that was assumed for the residential growth; the low auto mode share means the growth will result in relatively “few” vehicle trips.

“Few” in this case is still 400-600 vehicles per hour for the Approved land use and 900-1,500 vehicles per hour for the Ultimate land use. This vehicle trip generation has an impact on the road network and results in increased travel times, delays, queuing, etc., as well as traffic infiltration through the residential areas.

The growth in Williamsville will have relatively high walking, cycling, and transit mode shares and therefore it is important to have adequate facilities to accommodate the additional demands for these modes.

Improvements to walking, cycling, and transit facilities are key to maintaining the low auto mode share, which is critical to maintaining the viability of the Williamsville growth. The issue, however, is the narrow right-of-way for the Princess Street corridor (20 metres) which is an important Arterial road through the study area.

Due to the limited right-of-way, it is likely not possible for Princess Street to simultaneously be a transit priority corridor, a cycling spine route, a pedestrian-friendly corridor, and an Arterial class roadway leading to the downtown core. Therefore, compromises will need to be made in a way that improves multi-modal mobility, but recognizes the limited space to accommodate all modes of travel in a narrow corridor.

It is critical to develop a vision for the study area transportation network. This operational assessment should be revisited once this vision has been developed to determine how the needs of transportation modes can be balanced to support the growth in Williamsville and the City of Kingston.



7.0

## Next Steps

The next steps for the analysis are to identify the preferred role, function, and cross-section for the Princess Street, Concession Street, and Division Street transportation corridors.

We suggest additional analysis using optimized traffic control signal timings to improve throughput in the corridors based on their identified role and function. We also suggest investigating turn prohibitions and other traffic calming measures and the impact they may have on traffic infiltration and network operations.

## Appendix A

### Intersection Performance Worksheets



Williamsville Operational Analysis

2019 AM Peak Hour

Measures of Effectiveness Details

ID	Intersection Name	Control Type	Number of Vehicles	50th %ile Queue (m)	95th %ile Queue (m)	Avg. Vehicle Delay (sec)	Avg. Stop Delay (sec)	LOS
10	Princess St / Concession St	Signalized	2,606	43.3	65.8	26.9	21.4	C
20	Princess St / Regent St	TWSC	1,009	0.2	36.7	2.3	0.1	-
30	Princess St / Drayton Av	TWSC	957	0.0	50.8	1.9	0.1	-
40	Princess St / Macdonnell Av	Signalized	887	51.0	94.4	16.1	9.5	B
50	Princess St / Smith St	TWSC	733	28.8	33.0	1.6	0.0	-
60	Princess St / Victoria St	Signalized	879	8.4	52.7	7.0	3.5	A
70	Princess St / Nelson St	TWSC	786	0.3	3.8	1.6	0.1	-
80	Princess St / Albert St	Signalized	828	30.4	80.4	13.1	9.0	B
90	Princess St / Frontenac St	TWSC	775	0.0	0.1	1.0	0.1	-
100	Princess St / Alfred St	Signalized	1,109	44.4	74.2	23.7	16.7	C
110	Princess St / Chatham St	TWSC	747	0.0	25.8	1.5	0.0	-
120	Princess St / University Av	Signalized	723	15.0	56.2	5.4	2.4	A
130	Princess St / Division St	Signalized	950	18.2	45.8	16.9	12.3	B
140	Concession St / Drayton Av	TWSC	954	0.2	140.2	7.0	2.8	-
150	Concession St / Leroy Grant Dr (S)	TWSC	912	44.8	74.7	6.9	2.9	-
155	Concession St / Leroy Grant Drive (N)	TWSC	750	0.2	1.0	0.6	0.2	-
160	Concession St / Macdonnell St	Signalized	1,559	50.3	72.6	9.8	6.1	A
170	Concession St / Connaught St	TWSC	1,346	0.0	52.4	1.7	0.6	-
180	Concession St / Victoria St	Signalized	1,426	38.9	88.3	11.3	7.0	B
190	Concession St / Nelson St	TWSC	1,303	0.1	60.4	1.3	0.1	-
200	Concession St / Kingscourt Av	TWSC	1,283	0.2	40.4	1.3	0.4	-
210	Concession St / Fergus St	TWSC	1,315	0.2	40.3	2.7	1.4	-
220	Concession St / Grey St	TWSC	1,351	10.2	53.2	7.5	4.1	-
230	Concession St / Alfred St	Signalized	1,416	41.6	62.2	13.1	8.0	B
240	Concession St / Lansdowne St	TWSC	968	0.0	19.3	1.1	0.0	-
250	Concession St / Division St	Signalized	1,635	39.8	97.4	21.4	15.5	C
260	Adelaide St / Division St	TWSC	692	0.0	25.4	0.7	0.1	-
270	Stanley St / Division St	TWSC	777	0.5	20.8	2.6	0.9	-
280	Pine St / Division St	Signalized	837	18.4	48.2	8.7	5.1	A
290	Quebec St / Division St	TWSC	718	0.0	29.9	0.8	0.0	-
300	York St / Division St	Signalized	787	15.7	35.7	6.6	4.1	A
310	Main St / Division St	TWSC	644	21.3	30.1	0.9	0.4	-
320	Hamilton St / Division St	TWSC	622	0.0	0.0	0.0	0.0	-
330	Raglan St / Division St	TWSC	625	0.0	0.0	0.1	0.0	-
340	Elm St / Division St	TWSC	614	0.0	0.0	0.1	0.0	-
350	Ellice St / Division St	TWSC	617	0.0	0.1	0.2	0.0	-
360	Colborne St / Division St	TWSC	612	0.0	13.5	1.0	0.0	-
370	Queen St / Division St	Signalized	836	25.8	47.6	13.8	7.8	B
Total			37,588	548	1,673	241	143	

Williamsville Operational Analysis  
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Measures of Effectiveness Details



Node	Location	Control	Mvmt.	Volume (All)	Queue (m)		Stop Delay (s)	Delay (s)	LOS	Critical Mvmt		Intersection	
					50th	95th				Delay	LOS	Delay	LOS
10	Princess St / Concession St	Signalized	NBL	141	25	40	42	50	D	50.0	D	26.9	C
10	Princess St / Concession St	Signalized	NBT	110	25	40	38	45	D				
10	Princess St / Concession St	Signalized	NBR	37	25	40	0	3	A				
10	Princess St / Concession St	Signalized	SBL	490	70	95	29	37	D				
10	Princess St / Concession St	Signalized	SBT	481	70	95	29	37	D				
10	Princess St / Concession St	Signalized	SBR	31	70	95	14	18	B				
10	Princess St / Concession St	Signalized	EBT	418	35	60	26	32	C				
10	Princess St / Concession St	Signalized	EBR	190	35	60	0	2	A				
10	Princess St / Concession St	Signalized	WBT	236	20	40	26	31	C				
10	Princess St / Concession St	Signalized	WBR	343	20	40	0	0	A				
10	Princess St / Concession St	Signalized	WBL	129	20	40	1	4	A				
20	Princess St / Regent St	TWSC	NBL	3	5	10	1	9	A	11.0	B	2.3	A
20	Princess St / Regent St	TWSC	NBR	29	5	10	3	11	B				
20	Princess St / Regent St	TWSC	EBT	618	0	55	0	3	A				
20	Princess St / Regent St	TWSC	EBR	49	0	55	0	2	A				
20	Princess St / Regent St	TWSC	WBL	7	0	0	6	9	A				
20	Princess St / Regent St	TWSC	WBT	303	0	0	0	0	A				
30	Princess St / Drayton Av	TWSC	SBL	0	0	5	0	0	A	8.0	A	1.9	A
30	Princess St / Drayton Av	TWSC	SBR	12	0	5	2	8	A				
30	Princess St / Drayton Av	TWSC	EBL	100	0	75	1	3	A				
30	Princess St / Drayton Av	TWSC	EBT	548	0	75	0	2	A				
30	Princess St / Drayton Av	TWSC	WBT	295	0	0	0	1	A				
30	Princess St / Drayton Av	TWSC	WBR	2	0	0	0	1	A				
40	Princess St / Macdonnell Av	Signalized	NBL	41	5	20	12	18	B	20.0	B	16.1	B
40	Princess St / Macdonnell Av	Signalized	NBT	18	5	20	15	20	B				
40	Princess St / Macdonnell Av	Signalized	NBR	27	5	20	3	9	A				
40	Princess St / Macdonnell Av	Signalized	SBL	11	40	40	13	19	B				
40	Princess St / Macdonnell Av	Signalized	SBT	19	40	40	14	19	B				
40	Princess St / Macdonnell Av	Signalized	SBR	42	40	40	3	12	B				
40	Princess St / Macdonnell Av	Signalized	EBL	7	70	135	12	18	B				
40	Princess St / Macdonnell Av	Signalized	EBT	467	70	135	10	17	B				
40	Princess St / Macdonnell Av	Signalized	EBR	28	70	135	9	16	B				
40	Princess St / Macdonnell Av	Signalized	WBL	0	30	50	0	0	A				
40	Princess St / Macdonnell Av	Signalized	WBT	219	30	50	9	15	B				
40	Princess St / Macdonnell Av	Signalized	WBR	8	30	50	5	12	B				
50	Princess St / Smith St	TWSC	SBL	1	40	40	0	0	A	12.0	B	1.6	A
50	Princess St / Smith St	TWSC	SBR	22	40	40	1	12	B				
50	Princess St / Smith St	TWSC	EBL	2	40	40	0	0	A				
50	Princess St / Smith St	TWSC	EBT	503	40	40	0	1	A				
50	Princess St / Smith St	TWSC	WBT	205	0	15	0	2	A				
50	Princess St / Smith St	TWSC	WBR	0	0	15	0	0	A				
60	Princess St / Victoria St	Signalized	NBL	19	10	25	14	21	C	30.0	C	7.0	A
60	Princess St / Victoria St	Signalized	NBT	33	10	25	18	25	C				
60	Princess St / Victoria St	Signalized	NBR	45	10	25	6	13	B				
60	Princess St / Victoria St	Signalized	SBL	4	5	20	20	30	C				
60	Princess St / Victoria St	Signalized	SBT	57	5	20	16	21	C				
60	Princess St / Victoria St	Signalized	SBR	3	5	20	0	0	A				
60	Princess St / Victoria St	Signalized	EBL	1	10	70	0	0	A				
60	Princess St / Victoria St	Signalized	EBT	491	10	70	1	4	A				
60	Princess St / Victoria St	Signalized	EBR	7	10	70	1	4	A				
60	Princess St / Victoria St	Signalized	WBL	24	5	35	5	10	A				
60	Princess St / Victoria St	Signalized	WBT	180	5	35	2	4	A				
60	Princess St / Victoria St	Signalized	WBR	15	5	35	0	4	A				
70	Princess St / Nelson St	TWSC	NBL	2	0	5	0	0	A	17.0	C	1.6	A
70	Princess St / Nelson St	TWSC	NBT	0	0	5	0	0	A				
70	Princess St / Nelson St	TWSC	NBR	7	0	5	1	8	A				
70	Princess St / Nelson St	TWSC	SBL	8	5	5	3	17	C				
70	Princess St / Nelson St	TWSC	SBT	4	5	5	5	15	B				
70	Princess St / Nelson St	TWSC	SBR	29	5	5	1	8	A				
70	Princess St / Nelson St	TWSC	EBL	13	0	5	0	2	A				
70	Princess St / Nelson St	TWSC	EBT	532	0	5	0	1	A				
70	Princess St / Nelson St	TWSC	EBR	3	0	5	0	0	A				
70	Princess St / Nelson St	TWSC	WBL	1	0	0	5	9	A				
70	Princess St / Nelson St	TWSC	WBT	187	0	0	0	1	A				
70	Princess St / Nelson St	TWSC	WBR	0	0	0	0	0	A				

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Measures of Effectiveness Details



Node	Location	Control	Mvmt.	Volume (All)	Queue (m)		Stop Delay (s)	Delay (s)	LOS	Critical Mvmt		Intersection	
					50th	95th				Delay	LOS	Delay	LOS
80	Princess St / Albert St	Signalized	NBL	13	5	15	15	21	C	26.0	C	13.1	B
80	Princess St / Albert St	Signalized	NBT	16	5	15	13	18	B				
80	Princess St / Albert St	Signalized	NBR	25	5	15	1	6	A				
80	Princess St / Albert St	Signalized	SBL	2	0	10	5	9	A				
80	Princess St / Albert St	Signalized	SBT	30	0	10	10	13	B				
80	Princess St / Albert St	Signalized	SBR	3	0	10	0	5	A				
80	Princess St / Albert St	Signalized	EBL	0	40	100	0	0	A				
80	Princess St / Albert St	Signalized	EBT	535	40	100	10	14	B				
80	Princess St / Albert St	Signalized	EBR	16	40	100	8	12	B				
80	Princess St / Albert St	Signalized	WBL	8	15	55	22	26	C				
80	Princess St / Albert St	Signalized	WBT	180	15	55	6	10	A				
80	Princess St / Albert St	Signalized	WBR	0	15	55	0	0	A				
90	Princess St / Frontenac St	TWSC	NBL	1	0	5	0	0	A	11.0	B	1.0	A
90	Princess St / Frontenac St	TWSC	NBT	0	0	5	0	0	A				
90	Princess St / Frontenac St	TWSC	NBR	1	0	5	0	0	A				
90	Princess St / Frontenac St	TWSC	SBL	0	0	5	0	0	A				
90	Princess St / Frontenac St	TWSC	SBT	8	0	5	3	11	B				
90	Princess St / Frontenac St	TWSC	SBR	13	0	5	1	7	A				
90	Princess St / Frontenac St	TWSC	EBL	9	0	0	1	5	A				
90	Princess St / Frontenac St	TWSC	EBT	544	0	0	0	1	A				
90	Princess St / Frontenac St	TWSC	EBR	5	0	0	0	1	A				
90	Princess St / Frontenac St	TWSC	WBL	4	0	0	0	1	A				
90	Princess St / Frontenac St	TWSC	WBT	189	0	0	0	0	A				
90	Princess St / Frontenac St	TWSC	WBR	1	0	0	0	0	A				
100	Princess St / Alfred St	Signalized	NBL	25	15	45	15	22	C	35.0	C	23.7	C
100	Princess St / Alfred St	Signalized	NBT	103	15	45	12	18	B				
100	Princess St / Alfred St	Signalized	NBR	68	15	45	6	12	B				
100	Princess St / Alfred St	Signalized	SBL	27	25	45	14	22	C				
100	Princess St / Alfred St	Signalized	SBT	129	25	45	14	21	C				
100	Princess St / Alfred St	Signalized	SBR	51	25	45	7	13	B				
100	Princess St / Alfred St	Signalized	EBL	48	70	105	18	25	C				
100	Princess St / Alfred St	Signalized	EBT	484	70	105	21	29	C				
100	Princess St / Alfred St	Signalized	EBR	7	70	105	18	25	C				
100	Princess St / Alfred St	Signalized	WBL	7	20	45	26	35	C				
100	Princess St / Alfred St	Signalized	WBT	137	20	45	19	25	C				
100	Princess St / Alfred St	Signalized	WBR	23	20	45	0	3	A				
110	Princess St / Chatham St	TWSC	SBL	0	0	0	0	0	A	2.0	A	1.5	A
110	Princess St / Chatham St	TWSC	SBR	0	0	0	0	0	A				
110	Princess St / Chatham St	TWSC	EBL	12	0	20	0	2	A				
110	Princess St / Chatham St	TWSC	EBT	563	0	20	0	2	A				
110	Princess St / Chatham St	TWSC	WBT	169	0	45	0	0	A				
110	Princess St / Chatham St	TWSC	WBR	3	0	45	0	0	A				
120	Princess St / University Av	Signalized	NBL	21	5	10	19	24	C	24.0	C	5.4	A
120	Princess St / University Av	Signalized	NBR	20	5	10	2	7	A				
120	Princess St / University Av	Signalized	EBT	482	20	70	2	5	A				
120	Princess St / University Av	Signalized	EBR	49	20	70	1	5	A				
120	Princess St / University Av	Signalized	WBL	2	0	20	0	3	A				
120	Princess St / University Av	Signalized	WBT	149	0	20	2	4	A				
120	Princess St / University Av	Signalized	NBT	0	5	10	0	0	A				
120	Princess St / University Av	Signalized	SBL	0	0	0	0	0	A				
120	Princess St / University Av	Signalized	SBT	0	0	0	0	0	A				
120	Princess St / University Av	Signalized	SBR	0	0	0	0	0	A				
120	Princess St / University Av	Signalized	EBL	0	20	70	0	0	A				
120	Princess St / University Av	Signalized	WBR	0	0	20	0	0	A				
130	Princess St / Division St	Signalized	NBL	16	5	20	12	24	C	28.0	C	16.9	B
130	Princess St / Division St	Signalized	NBT	53	5	20	11	17	B				
130	Princess St / Division St	Signalized	NBR	1	5	20	0	0	A				
130	Princess St / Division St	Signalized	SBL	142	5	45	4	6	A				
130	Princess St / Division St	Signalized	SBT	96	5	45	3	4	A				
130	Princess St / Division St	Signalized	SBR	141	5	45	0	0	A				
130	Princess St / Division St	Signalized	EBL	134	30	50	21	28	C				
130	Princess St / Division St	Signalized	EBT	355	30	50	20	27	C				
130	Princess St / Division St	Signalized	EBR	12	30	50	8	16	B				

Williamsville Operational Analysis  
2019 AM Peak Hour

Measures of Effectiveness Details



Node	Location	Control	Mvmt.	Volume (All)	Queue (m)		Stop Delay (s)	Delay (s)	LOS	Critical Mvmt		Intersection	
					50th	95th				Delay	LOS	Delay	LOS
140	Concession St / Drayton Av	TWSC	NBR	34	5	10	23	32	D	32.0	D	7.0	A
140	Concession St / Drayton Av	TWSC	EBT	908	0	145	2	6	A				
140	Concession St / Drayton Av	TWSC	EBR	12	0	145	8	15	B				
150	Concession St / Leroy Grant Dr (S)	TWSC	SBL	4	0	5	8	20	C	20.0	C	6.9	A
150	Concession St / Leroy Grant Dr (S)	TWSC	EBL	33	45	75	1	4	A				
150	Concession St / Leroy Grant Dr (S)	TWSC	EBT	875	45	75	3	7	A				
155	Concession St / Leroy Grant Drive (N)	TWSC	NBL	22	5	10	2	10	A	15.0	B	0.6	A
155	Concession St / Leroy Grant Drive (N)	TWSC	NBT	11	5	10	6	15	B				
155	Concession St / Leroy Grant Drive (N)	TWSC	SBT	4	0	5	2	14	B				
155	Concession St / Leroy Grant Drive (N)	TWSC	SBR	79	0	5	0	0	A				
155	Concession St / Leroy Grant Drive (N)	TWSC	WBT	608	0	0	0	0	A				
155	Concession St / Leroy Grant Drive (N)	TWSC	WBR	26	0	0	0	1	A				
160	Concession St / Macdonnell St	Signalized	NBL	0	0	5	0	0	A	34.0	C	9.8	A
160	Concession St / Macdonnell St	Signalized	NBT	0	0	5	0	0	A				
160	Concession St / Macdonnell St	Signalized	NBR	7	0	5	1	6	A				
160	Concession St / Macdonnell St	Signalized	SBR	46	0	5	1	3	A				
160	Concession St / Macdonnell St	Signalized	EBL	36	75	75	14	21	C				
160	Concession St / Macdonnell St	Signalized	EBT	702	75	75	7	11	B				
160	Concession St / Macdonnell St	Signalized	EBR	141	75	75	5	9	A				
160	Concession St / Macdonnell St	Signalized	WBL	37	20	75	26	34	C				
160	Concession St / Macdonnell St	Signalized	WBT	590	20	75	4	7	A				
160	Concession St / Macdonnell St	Signalized	WBR	0	20	75	0	0	A				
170	Concession St / Connaught St	TWSC	SBL	9	0	5	6	16	C	16.0	C	1.7	A
170	Concession St / Connaught St	TWSC	SBR	7	0	5	4	11	B				
170	Concession St / Connaught St	TWSC	EBL	15	0	95	4	8	A				
170	Concession St / Connaught St	TWSC	EBT	694	0	95	1	2	A				
170	Concession St / Connaught St	TWSC	WBT	618	0	5	0	1	A				
170	Concession St / Connaught St	TWSC	WBR	3	0	5	0	0	A				
180	Concession St / Victoria St	Signalized	NBL	12	5	15	23	29	C	33.0	C	11.3	B
180	Concession St / Victoria St	Signalized	NBT	17	5	15	15	19	B				
180	Concession St / Victoria St	Signalized	NBR	13	5	15	8	14	B				
180	Concession St / Victoria St	Signalized	SBL	7	5	15	26	33	C				
180	Concession St / Victoria St	Signalized	SBT	27	5	15	21	26	C				
180	Concession St / Victoria St	Signalized	SBR	47	5	15	1	9	A				
180	Concession St / Victoria St	Signalized	EBL	21	35	100	10	15	B				
180	Concession St / Victoria St	Signalized	EBT	658	35	100	6	9	A				
180	Concession St / Victoria St	Signalized	EBR	7	35	100	8	15	B				
180	Concession St / Victoria St	Signalized	WBL	47	50	90	19	27	C				
180	Concession St / Victoria St	Signalized	WBT	569	50	90	6	11	B				
180	Concession St / Victoria St	Signalized	WBR	1	50	90	0	0	A				
190	Concession St / Nelson St	TWSC	NBL	11	0	5	10	19	C	19.0	C	1.3	A
190	Concession St / Nelson St	TWSC	NBT	0	0	5	0	0	A				
190	Concession St / Nelson St	TWSC	NBR	0	0	5	0	0	A				
190	Concession St / Nelson St	TWSC	SBL	0	5	5	0	0	A				
190	Concession St / Nelson St	TWSC	SBT	0	5	5	0	0	A				
190	Concession St / Nelson St	TWSC	SBR	23	5	5	0	6	A				
190	Concession St / Nelson St	TWSC	EBL	43	0	85	1	3	A				
190	Concession St / Nelson St	TWSC	EBT	640	0	85	0	1	A				
190	Concession St / Nelson St	TWSC	EBR	0	0	85	0	0	A				
190	Concession St / Nelson St	TWSC	WBL	8	0	35	3	6	A				
190	Concession St / Nelson St	TWSC	WBT	578	0	35	0	1	A				
190	Concession St / Nelson St	TWSC	WBR	0	0	35	0	0	A				

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Node	Location	Control	Mvmt.	Volume (All)	Queue (m)		Stop Delay (s)	Delay (s)	LOS	Critical Mvmt		Intersection	
					50th	95th				Delay	LOS	Delay	LOS
200	Concession St / Kingscourt Av	TWSC	SBL	39	5	15	10	20	C	20.0	C	1.3	A
200	Concession St / Kingscourt Av	TWSC	SBR	5	5	15	5	19	C				
200	Concession St / Kingscourt Av	TWSC	EBL	24	0	80	2	6	A				
200	Concession St / Kingscourt Av	TWSC	EBT	616	0	80	0	1	A				
200	Concession St / Kingscourt Av	TWSC	WBT	578	0	0	0	0	A				
200	Concession St / Kingscourt Av	TWSC	WBR	21	0	0	0	0	A				
210	Concession St / Fergus St	TWSC	SBL	44	5	15	11	20	C	20.0	C	2.7	A
210	Concession St / Fergus St	TWSC	SBR	2	5	15	2	10	A				
210	Concession St / Fergus St	TWSC	EBL	23	0	80	3	6	A				
210	Concession St / Fergus St	TWSC	EBT	630	0	80	2	4	A				
210	Concession St / Fergus St	TWSC	WBT	595	0	0	0	0	A				
210	Concession St / Fergus St	TWSC	WBR	21	0	0	0	0	A				
220	Concession St / Grey St	TWSC	SBL	41	5	15	32	43	E	43.0	E	7.5	A
220	Concession St / Grey St	TWSC	SBR	11	5	15	19	28	D				
220	Concession St / Grey St	TWSC	EBL	21	20	105	6	12	B				
220	Concession St / Grey St	TWSC	EBT	656	20	105	6	12	B				
220	Concession St / Grey St	TWSC	WBT	601	0	0	0	0	A				
220	Concession St / Grey St	TWSC	WBR	21	0	0	0	0	A				
230	Concession St / Alfred St	Signalized	NBL	174	25	50	17	28	C	31.0	C	13.1	B
230	Concession St / Alfred St	Signalized	NBT	10	25	50	22	31	C				
230	Concession St / Alfred St	Signalized	NBR	29	25	50	11	19	B				
230	Concession St / Alfred St	Signalized	SBL	2	5	15	21	30	C				
230	Concession St / Alfred St	Signalized	SBT	37	5	15	14	19	B				
230	Concession St / Alfred St	Signalized	SBR	38	5	15	3	8	A				
230	Concession St / Alfred St	Signalized	EBL	33	55	60	12	18	B				
230	Concession St / Alfred St	Signalized	EBT	488	55	60	7	11	B				
230	Concession St / Alfred St	Signalized	EBR	170	55	60	2	3	A				
230	Concession St / Alfred St	Signalized	WBL	22	35	80	9	16	B				
230	Concession St / Alfred St	Signalized	WBT	411	35	80	7	12	B				
230	Concession St / Alfred St	Signalized	WBR	2	35	80	0	0	A				
240	Concession St / Lansdowne St	TWSC	NBL	0	0	0	0	0	A	5.0	A	1.1	A
240	Concession St / Lansdowne St	TWSC	NBR	0	0	0	0	0	A				
240	Concession St / Lansdowne St	TWSC	EBT	519	0	10	0	1	A				
240	Concession St / Lansdowne St	TWSC	EBR	0	0	10	0	0	A				
240	Concession St / Lansdowne St	TWSC	WBL	13	0	30	2	5	A				
240	Concession St / Lansdowne St	TWSC	WBT	436	0	30	0	1	A				
250	Concession St / Division St	Signalized	NBL	16	25	60	19	27	C	43.0	D	21.4	C
250	Concession St / Division St	Signalized	NBT	222	25	60	16	21	C				
250	Concession St / Division St	Signalized	NBR	13	25	60	11	17	B				
250	Concession St / Division St	Signalized	SBL	32	50	110	18	26	C				
250	Concession St / Division St	Signalized	SBT	362	50	110	16	22	C				
250	Concession St / Division St	Signalized	SBR	201	50	110	2	6	A				
250	Concession St / Division St	Signalized	EBL	160	35	110	16	22	C				
250	Concession St / Division St	Signalized	EBT	345	35	110	12	17	B				
250	Concession St / Division St	Signalized	EBR	13	35	110	4	8	A				
250	Concession St / Division St	Signalized	WBL	22	40	80	33	43	D				
250	Concession St / Division St	Signalized	WBT	234	40	80	29	38	D				
250	Concession St / Division St	Signalized	WBR	15	40	80	20	27	C				



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Measures of Effectiveness Details



Node	Location	Control	Mvmt.	Volume (All)	Queue (m)		Stop Delay (s)	Delay (s)	LOS	Critical Mvmt		Intersection	
					50th	95th				Delay	LOS	Delay	LOS
260	Adelaide St / Division St	TWSC	NBL	39	0	20	1	3	A	12.0	B	0.7	A
260	Adelaide St / Division St	TWSC	NBT	239	0	20	0	1	A				
260	Adelaide St / Division St	TWSC	NBR	3	0	20	0	1	A				
260	Adelaide St / Division St	TWSC	SBL	11	0	30	0	1	A				
260	Adelaide St / Division St	TWSC	SBT	374	0	30	0	0	A				
260	Adelaide St / Division St	TWSC	SBR	11	0	30	0	0	A				
260	Adelaide St / Division St	TWSC	EBL	4	0	10	2	9	A				
260	Adelaide St / Division St	TWSC	EBT	2	0	10	3	11	B				
260	Adelaide St / Division St	TWSC	EBR	0	0	10	0	0	A				
260	Adelaide St / Division St	TWSC	WBL	0	0	5	0	0	A				
260	Adelaide St / Division St	TWSC	WBT	2	0	5	2	12	B				
260	Adelaide St / Division St	TWSC	WBR	7	0	5	1	8	A				
270	Stanley St / Division St	TWSC	NBL	51	0	20	1	4	A	10.0	A	2.6	A
270	Stanley St / Division St	TWSC	NBT	268	0	20	0	1	A				
270	Stanley St / Division St	TWSC	SBT	373	0	25	1	2	A				
270	Stanley St / Division St	TWSC	SBR	0	0	25	0	0	A				
270	Stanley St / Division St	TWSC	EBL	15	5	5	2	9	A				
270	Stanley St / Division St	TWSC	EBR	70	5	5	3	10	A				
280	Pine St / Division St	Signalized	NBL	0	5	25	0	0	A	34.0	C	8.7	A
280	Pine St / Division St	Signalized	NBT	269	5	25	3	5	A				
280	Pine St / Division St	Signalized	NBR	6	5	25	0	0	A				
280	Pine St / Division St	Signalized	SBL	43	30	70	5	9	A				
280	Pine St / Division St	Signalized	SBT	406	30	70	4	8	A				
280	Pine St / Division St	Signalized	SBR	0	30	70	0	0	A				
280	Pine St / Division St	Signalized	EBL	0	5	10	0	0	A				
280	Pine St / Division St	Signalized	EBT	23	5	10	24	29	C				
280	Pine St / Division St	Signalized	EBR	3	5	10	0	7	A				
280	Pine St / Division St	Signalized	WBL	20	5	20	26	34	C				
280	Pine St / Division St	Signalized	WBT	16	5	20	18	25	C				
280	Pine St / Division St	Signalized	WBR	51	5	20	5	11	B				
290	Quebec St / Division St	TWSC	NBT	268	0	0	0	0	A	10.0	A	0.8	A
290	Quebec St / Division St	TWSC	NBR	3	0	0	0	0	A				
290	Quebec St / Division St	TWSC	SBL	3	0	50	0	2	A				
290	Quebec St / Division St	TWSC	SBT	425	0	50	0	1	A				
290	Quebec St / Division St	TWSC	WBL	13	0	5	2	10	A				
290	Quebec St / Division St	TWSC	WBR	6	0	5	1	7	A				
300	York St / Division St	Signalized	NBL	1	30	35	0	0	A	29.0	C	6.6	A
300	York St / Division St	Signalized	NBT	240	30	35	3	5	A				
300	York St / Division St	Signalized	NBR	9	30	35	1	4	A				
300	York St / Division St	Signalized	SBL	54	10	40	2	4	A				
300	York St / Division St	Signalized	SBT	385	10	40	2	4	A				
300	York St / Division St	Signalized	SBR	0	10	40	0	0	A				
300	York St / Division St	Signalized	EBL	0	5	15	0	0	A				
300	York St / Division St	Signalized	EBT	32	5	15	24	29	C				
300	York St / Division St	Signalized	EBR	3	5	15	18	22	C				
300	York St / Division St	Signalized	WBL	2	5	20	0	0	A				
300	York St / Division St	Signalized	WBT	31	5	20	22	28	C				
300	York St / Division St	Signalized	WBR	30	5	20	5	11	B				
310	Main St / Division St	TWSC	NBT	245	0	15	1	2	A	13.0	B	0.9	A
310	Main St / Division St	TWSC	NBR	0	0	15	0	0	A				
310	Main St / Division St	TWSC	SBL	15	35	40	0	2	A				
310	Main St / Division St	TWSC	SBT	377	35	40	0	0	A				
310	Main St / Division St	TWSC	WBL	0	0	5	0	0	A				
310	Main St / Division St	TWSC	WBR	7	0	5	4	13	B				

Williamsville Operational Analysis  
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Measures of Effectiveness Details



Node	Location	Control	Mvmt.	Volume (All)	Queue (m)		Stop Delay (s)	Delay (s)	LOS	Critical Mvmt		Intersection	
					50th	95th				Delay	LOS	Delay	LOS
320	Hamilton St / Division St	TWSC	NBL	0	0	0	0	0	A	9.0	A	0.0	A
320	Hamilton St / Division St	TWSC	NBT	242	0	0	0	0	A				
320	Hamilton St / Division St	TWSC	SBT	377	0	0	0	0	A				
320	Hamilton St / Division St	TWSC	SBR	0	0	0	0	0	A				
320	Hamilton St / Division St	TWSC	EBL	3	0	5	2	9	A				
320	Hamilton St / Division St	TWSC	EBR	0	0	5	0	0	A				
330	Raglan St / Division St	TWSC	NBT	236	0	0	0	0	A	8.0	A	0.1	A
330	Raglan St / Division St	TWSC	NBR	6	0	0	0	0	A				
330	Raglan St / Division St	TWSC	SBL	8	0	0	0	1	A				
330	Raglan St / Division St	TWSC	SBT	369	0	0	0	0	A				
330	Raglan St / Division St	TWSC	WBL	2	0	5	0	8	A				
330	Raglan St / Division St	TWSC	WBR	4	0	5	1	8	A				
340	Elm St / Division St	TWSC	NBL	0	0	0	0	0	A	8.0	A	0.1	A
340	Elm St / Division St	TWSC	NBT	238	0	0	0	0	A				
340	Elm St / Division St	TWSC	SBT	368	0	0	0	0	A				
340	Elm St / Division St	TWSC	SBR	2	0	0	0	0	A				
340	Elm St / Division St	TWSC	EBL	6	0	5	1	8	A				
340	Elm St / Division St	TWSC	EBR	0	0	5	0	0	A				
350	Ellice St / Division St	TWSC	NBT	229	0	0	0	0	A	8.0	A	0.2	A
350	Ellice St / Division St	TWSC	NBR	8	0	0	0	0	A				
350	Ellice St / Division St	TWSC	SBL	9	0	0	0	2	A				
350	Ellice St / Division St	TWSC	SBT	359	0	0	0	0	A				
350	Ellice St / Division St	TWSC	WBL	3	0	5	0	8	A				
350	Ellice St / Division St	TWSC	WBR	9	0	5	0	7	A				
360	Colborne St / Division St	TWSC	NBL	0	0	20	0	0	A	11.0	B	1.0	A
360	Colborne St / Division St	TWSC	NBT	226	0	20	0	0	A				
360	Colborne St / Division St	TWSC	NBR	0	0	20	0	0	A				
360	Colborne St / Division St	TWSC	SBL	10	0	10	0	1	A				
360	Colborne St / Division St	TWSC	SBT	352	0	10	0	1	A				
360	Colborne St / Division St	TWSC	SBR	0	0	10	0	0	A				
360	Colborne St / Division St	TWSC	EBL	8	0	5	2	9	A				
360	Colborne St / Division St	TWSC	EBT	4	0	5	1	9	A				
360	Colborne St / Division St	TWSC	EBR	0	0	5	0	0	A				
360	Colborne St / Division St	TWSC	WBL	5	0	5	2	11	B				
360	Colborne St / Division St	TWSC	WBT	4	0	5	0	9	A				
360	Colborne St / Division St	TWSC	WBR	3	0	5	0	7	A				
370	Queen St / Division St	Signalized	NBT	64	15	30	7	10	A	21.0	C	13.8	B
370	Queen St / Division St	Signalized	NBR	121	15	30	1	10	A				
370	Queen St / Division St	Signalized	SBL	111	40	75	14	21	C				
370	Queen St / Division St	Signalized	SBT	249	40	75	13	19	B				
370	Queen St / Division St	Signalized	WBL	129	15	25	9	14	B				
370	Queen St / Division St	Signalized	WBR	162	15	25	0	5	A				



Williamsville Operational Analysis

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Measures of Effectiveness Details

ID	Intersection Name	Control Type	Number of Vehicles	50th %ile Queue (m)	95th %ile Queue (m)	Avg. Vehicle Delay (sec)	Avg. Stop Delay (sec)	LOS
10	Princess St / Concession St	Signalized	3,218	46.8	80.8	28.8	23.5	C
20	Princess St / Regent St	TWSC	1,458	0.1	60.7	2.9	1.1	-
30	Princess St / Drayton Av	TWSC	1,374	15.3	50.1	2.4	0.4	-
40	Princess St / Macdonnell Av	Signalized	1,353	70.6	146.5	19.5	12.9	B
50	Princess St / Smith St	TWSC	1,116	36.2	65.2	5.1	2.6	-
60	Princess St / Victoria St	Signalized	1,323	23.4	72.9	10.6	6.4	B
70	Princess St / Nelson St	TWSC	1,127	5.6	61.4	3.3	0.9	-
80	Princess St / Albert St	Signalized	1,117	43.8	90.8	16.4	11.6	B
90	Princess St / Frontenac St	TWSC	1,108	2.7	72.4	3.8	1.4	-
100	Princess St / Alfred St	Signalized	1,443	68.8	97.4	26.5	18.8	C
110	Princess St / Chatham St	TWSC	1,210	20.5	92.7	6.9	3.6	-
120	Princess St / University Av	Signalized	1,166	30.1	47.3	7.2	4.3	A
130	Princess St / Division St	Signalized	1,457	18.7	57.5	14.3	9.4	B
140	Concession St / Drayton Av	TWSC	1,014	24.4	166.5	21.4	12.9	-
150	Concession St / Leroy Grant Dr (S)	TWSC	1,084	68.7	73.6	22.4	14.5	-
155	Concession St / Leroy Grant Drive (N)	TWSC	1,202	2.4	7.7	4.1	1.9	-
160	Concession St / Macdonnell St	Signalized	2,016	72.6	77.1	15.0	9.3	B
170	Concession St / Connaught St	TWSC	1,751	30.0	104.3	6.7	3.1	-
180	Concession St / Victoria St	Signalized	1,956	90.0	95.1	15.9	9.9	B
190	Concession St / Nelson St	TWSC	1,730	0.0	89.3	3.5	1.5	-
200	Concession St / Kingscourt Av	TWSC	1,667	0.0	94.2	3.6	1.6	-
210	Concession St / Fergus St	TWSC	1,659	0.0	69.4	4.2	2.2	-
220	Concession St / Grey St	TWSC	1,659	22.3	52.1	7.5	4.5	-
230	Concession St / Alfred St	Signalized	1,796	53.8	86.2	16.5	11.2	B
240	Concession St / Lansdowne St	TWSC	1,182	0.0	32.5	1.7	0.6	-
250	Concession St / Division St	Signalized	2,160	68.0	136.9	29.2	22.3	C
260	Adelaide St / Division St	TWSC	1,097	0.0	71.6	4.0	1.8	-
270	Stanley St / Division St	TWSC	1,064	0.0	24.0	1.5	0.4	-
280	Pine St / Division St	Signalized	1,134	18.3	65.7	9.3	5.4	A
290	Quebec St / Division St	TWSC	976	0.0	48.1	1.6	0.5	-
300	York St / Division St	Signalized	1,056	24.6	42.5	7.2	4.6	A
310	Main St / Division St	TWSC	938	25.9	49.2	3.7	1.8	-
320	Hamilton St / Division St	TWSC	936	0.0	20.4	0.6	0.0	-
330	Raglan St / Division St	TWSC	931	0.0	0.1	0.1	0.0	-
340	Elm St / Division St	TWSC	962	0.0	9.1	0.2	0.0	-
350	Ellice St / Division St	TWSC	927	0.0	27.6	0.2	0.0	-
360	Colborne St / Division St	TWSC	911	0.0	23.3	0.7	0.5	-
370	Queen St / Division St	Signalized	1,429	41.2	81.8	17.6	9.7	B
Total			51,707	925	2,544	346	217	

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Node	Location	Control	Mvmt.	Volume (All)	Queue (m)		Stop Delay (s)	Delay (s)	LOS	Critical Mvmt		Intersection	
					50th	95th				Delay	LOS	Delay	LOS
10	Princess St / Concession St	Signalized	NBL	307	45	115	33	40	D	44.0	D	28.8	C
10	Princess St / Concession St	Signalized	NBT	333	45	115	33	40	D				
10	Princess St / Concession St	Signalized	NBR	19	45	115	8	14	B				
10	Princess St / Concession St	Signalized	SBL	517	70	105	36	44	D				
10	Princess St / Concession St	Signalized	SBT	463	70	105	35	44	D				
10	Princess St / Concession St	Signalized	SBR	0	70	105	0	0	A				
10	Princess St / Concession St	Signalized	EBT	228	20	35	30	35	C				
10	Princess St / Concession St	Signalized	EBR	313	20	35	0	1	A				
10	Princess St / Concession St	Signalized	WBT	400	40	60	32	38	D				
10	Princess St / Concession St	Signalized	WBR	610	40	60	0	0	A				
10	Princess St / Concession St	Signalized	WBL	28	40	60	1	4	A				
20	Princess St / Regent St	TWSC	NBL	18	5	10	8	17	C	17.0	C	2.9	A
20	Princess St / Regent St	TWSC	NBR	17	5	10	2	10	A				
20	Princess St / Regent St	TWSC	EBT	689	0	55	1	3	A				
20	Princess St / Regent St	TWSC	EBR	71	0	55	0	2	A				
20	Princess St / Regent St	TWSC	WBL	33	0	70	5	8	A				
20	Princess St / Regent St	TWSC	WBT	630	0	70	1	2	A				
30	Princess St / Drayton Av	TWSC	SBL	4	5	45	9	22	C	22.0	C	2.4	A
30	Princess St / Drayton Av	TWSC	SBR	73	5	45	5	15	B				
30	Princess St / Drayton Av	TWSC	EBL	42	0	55	2	5	A				
30	Princess St / Drayton Av	TWSC	EBT	664	0	55	0	1	A				
30	Princess St / Drayton Av	TWSC	WBT	591	35	45	0	2	A				
30	Princess St / Drayton Av	TWSC	WBR	0	35	45	0	0	A				
40	Princess St / Macdonnell Av	Signalized	NBL	69	40	55	14	20	B	29.0	C	19.5	B
40	Princess St / Macdonnell Av	Signalized	NBT	28	40	55	12	21	C				
40	Princess St / Macdonnell Av	Signalized	NBR	67	40	55	6	15	B				
40	Princess St / Macdonnell Av	Signalized	SBL	2	10	40	15	23	C				
40	Princess St / Macdonnell Av	Signalized	SBT	39	10	40	13	18	B				
40	Princess St / Macdonnell Av	Signalized	SBR	43	10	40	4	13	B				
40	Princess St / Macdonnell Av	Signalized	EBL	41	100	245	21	29	C				
40	Princess St / Macdonnell Av	Signalized	EBT	590	100	245	16	24	C				
40	Princess St / Macdonnell Av	Signalized	EBR	27	100	245	9	16	B				
40	Princess St / Macdonnell Av	Signalized	WBL	6	50	55	19	28	C				
40	Princess St / Macdonnell Av	Signalized	WBT	437	50	55	10	14	B				
40	Princess St / Macdonnell Av	Signalized	WBR	4	50	55	5	9	A				
50	Princess St / Smith St	TWSC	SBL	0	40	40	0	0	A	23.0	C	5.1	A
50	Princess St / Smith St	TWSC	SBR	29	40	40	10	23	C				
50	Princess St / Smith St	TWSC	EBL	27	40	60	2	4	A				
50	Princess St / Smith St	TWSC	EBT	632	40	60	0	1	A				
50	Princess St / Smith St	TWSC	WBT	428	30	75	6	10	A				
50	Princess St / Smith St	TWSC	WBR	0	30	75	0	0	A				
60	Princess St / Victoria St	Signalized	NBL	15	10	35	19	26	C	28.0	C	10.6	B
60	Princess St / Victoria St	Signalized	NBT	76	10	35	17	24	C				
60	Princess St / Victoria St	Signalized	NBR	57	10	35	6	12	B				
60	Princess St / Victoria St	Signalized	SBL	14	5	20	20	28	C				
60	Princess St / Victoria St	Signalized	SBT	38	5	20	15	21	C				
60	Princess St / Victoria St	Signalized	SBR	14	5	20	3	6	A				
60	Princess St / Victoria St	Signalized	EBL	94	20	100	9	16	B				
60	Princess St / Victoria St	Signalized	EBT	534	20	100	2	5	A				
60	Princess St / Victoria St	Signalized	EBR	14	20	100	2	6	A				
60	Princess St / Victoria St	Signalized	WBL	17	35	55	13	17	B				
60	Princess St / Victoria St	Signalized	WBT	388	35	55	8	12	B				
60	Princess St / Victoria St	Signalized	WBR	62	35	55	6	10	A				
70	Princess St / Nelson St	TWSC	NBL	14	0	5	11	20	C	20.0	C	3.3	A
70	Princess St / Nelson St	TWSC	NBT	0	0	5	0	0	A				
70	Princess St / Nelson St	TWSC	NBR	0	0	5	0	0	A				
70	Princess St / Nelson St	TWSC	SBL	2	0	5	0	6	A				
70	Princess St / Nelson St	TWSC	SBT	1	0	5	0	0	A				
70	Princess St / Nelson St	TWSC	SBR	0	0	5	0	0	A				
70	Princess St / Nelson St	TWSC	EBL	95	10	110	3	8	A				
70	Princess St / Nelson St	TWSC	EBT	527	10	110	1	5	A				
70	Princess St / Nelson St	TWSC	EBR	6	10	110	0	1	A				
70	Princess St / Nelson St	TWSC	WBL	0	0	0	0	0	A				
70	Princess St / Nelson St	TWSC	WBT	468	0	0	0	0	A				
70	Princess St / Nelson St	TWSC	WBR	14	0	0	0	0	A				

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Node	Location	Control	Mvmt.	Volume (All)	Queue (m)		Stop Delay (s)	Delay (s)	LOS	Critical Mvmt		Intersection	
					50th	95th				Delay	LOS	Delay	LOS
80	Princess St / Albert St	Signalized	NBL	49	10	20	13	18	B	39.0	D	16.4	B
80	Princess St / Albert St	Signalized	NBT	18	10	20	11	16	B				
80	Princess St / Albert St	Signalized	NBR	39	10	20	3	8	A				
80	Princess St / Albert St	Signalized	SBL	0	0	0	0	0	A				
80	Princess St / Albert St	Signalized	SBT	0	0	0	0	0	A				
80	Princess St / Albert St	Signalized	SBR	7	0	0	0	3	A				
80	Princess St / Albert St	Signalized	EBL	21	50	115	23	33	C				
80	Princess St / Albert St	Signalized	EBT	500	50	115	13	18	B				
80	Princess St / Albert St	Signalized	EBR	21	50	115	13	18	B				
80	Princess St / Albert St	Signalized	WBL	28	45	80	31	39	D				
80	Princess St / Albert St	Signalized	WBT	434	45	80	9	13	B				
80	Princess St / Albert St	Signalized	WBR	0	45	80	0	0	A				
90	Princess St / Frontenac St	TWSC	NBL	4	0	5	14	23	C	23.0	C	3.8	A
90	Princess St / Frontenac St	TWSC	NBT	8	0	5	10	21	C				
90	Princess St / Frontenac St	TWSC	NBR	0	0	5	0	0	A				
90	Princess St / Frontenac St	TWSC	SBL	0	0	5	0	0	A				
90	Princess St / Frontenac St	TWSC	SBT	0	0	5	0	0	A				
90	Princess St / Frontenac St	TWSC	SBR	3	0	5	0	7	A				
90	Princess St / Frontenac St	TWSC	EBL	63	5	135	5	11	B				
90	Princess St / Frontenac St	TWSC	EBT	531	5	135	2	6	A				
90	Princess St / Frontenac St	TWSC	EBR	0	5	135	0	0	A				
90	Princess St / Frontenac St	TWSC	WBL	0	0	0	0	0	A				
90	Princess St / Frontenac St	TWSC	WBT	490	0	0	0	0	A				
90	Princess St / Frontenac St	TWSC	WBR	9	0	0	0	0	A				
100	Princess St / Alfred St	Signalized	NBL	31	25	50	15	22	C	35.0	C	26.5	C
100	Princess St / Alfred St	Signalized	NBT	115	25	50	13	20	B				
100	Princess St / Alfred St	Signalized	NBR	104	25	50	6	12	B				
100	Princess St / Alfred St	Signalized	SBL	36	10	30	15	22	C				
100	Princess St / Alfred St	Signalized	SBT	49	10	30	12	18	B				
100	Princess St / Alfred St	Signalized	SBR	26	10	30	5	11	B				
100	Princess St / Alfred St	Signalized	EBL	5	80	140	26	34	C				
100	Princess St / Alfred St	Signalized	EBT	529	80	140	23	33	C				
100	Princess St / Alfred St	Signalized	EBR	14	80	140	24	35	C				
100	Princess St / Alfred St	Signalized	WBL	33	90	90	12	19	B				
100	Princess St / Alfred St	Signalized	WBT	445	90	90	21	27	C				
100	Princess St / Alfred St	Signalized	WBR	56	90	90	16	22	C				
110	Princess St / Chatham St	TWSC	SBL	0	0	0	0	0	A	22.0	C	6.9	A
110	Princess St / Chatham St	TWSC	SBR	0	0	0	0	0	A				
110	Princess St / Chatham St	TWSC	EBL	69	25	115	5	11	B				
110	Princess St / Chatham St	TWSC	EBT	601	25	115	3	8	A				
110	Princess St / Chatham St	TWSC	WBT	533	15	65	4	5	A				
110	Princess St / Chatham St	TWSC	WBR	7	15	65	14	22	C				
120	Princess St / University Av	Signalized	NBL	55	5	20	16	21	C	21.0	C	7.2	A
120	Princess St / University Av	Signalized	NBR	28	5	20	3	9	A				
120	Princess St / University Av	Signalized	EBT	528	55	70	5	9	A				
120	Princess St / University Av	Signalized	EBR	21	55	70	3	7	A				
120	Princess St / University Av	Signalized	WBL	15	5	25	7	12	B				
120	Princess St / University Av	Signalized	WBT	482	5	25	2	3	A				
120	Princess St / University Av	Signalized	NBT	0	5	20	0	0	A				
120	Princess St / University Av	Signalized	SBL	0	0	0	0	0	A				
120	Princess St / University Av	Signalized	SBT	0	0	0	0	0	A				
120	Princess St / University Av	Signalized	SBR	0	0	0	0	0	A				
120	Princess St / University Av	Signalized	EBL	37	55	70	7	14	B				
120	Princess St / University Av	Signalized	WBR	0	5	25	0	0	A				
130	Princess St / Division St	Signalized	NBL	53	20	40	14	22	C	27.0	C	14.3	B
130	Princess St / Division St	Signalized	NBT	152	20	40	13	20	B				
130	Princess St / Division St	Signalized	NBR	11	20	40	9	15	B				
130	Princess St / Division St	Signalized	SBL	134	5	65	5	8	A				
130	Princess St / Division St	Signalized	SBT	109	5	65	3	4	A				
130	Princess St / Division St	Signalized	SBR	440	5	65	0	1	A				
130	Princess St / Division St	Signalized	EBL	153	35	55	16	25	C				
130	Princess St / Division St	Signalized	EBT	381	35	55	19	27	C				
130	Princess St / Division St	Signalized	EBR	24	35	55	9	16	B				

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Node	Location	Control	Mvmt.	Volume (All)	Queue (m)		Stop Delay (s)	Delay (s)	LOS	Critical Mvmt		Intersection	
					50th	95th				Delay	LOS	Delay	LOS
140	Concession St / Drayton Av	TWSC	NBR	28	5	45	213	231	F	231.0	F	21.4	C
140	Concession St / Drayton Av	TWSC	EBT	942	25	170	7	15	B				
140	Concession St / Drayton Av	TWSC	EBR	44	25	170	13	26	D				
150	Concession St / Leroy Grant Dr (S)	TWSC	SBL	22	5	5	7	19	C	25.0	C	22.4	C
150	Concession St / Leroy Grant Dr (S)	TWSC	EBL	184	70	75	18	25	C				
150	Concession St / Leroy Grant Dr (S)	TWSC	EBT	878	70	75	14	22	C				
155	Concession St / Leroy Grant Drive (N)	TWSC	NBL	95	15	50	11	24	C	24.0	C	4.1	A
155	Concession St / Leroy Grant Drive (N)	TWSC	NBT	88	15	50	12	24	C				
155	Concession St / Leroy Grant Drive (N)	TWSC	SBT	22	5	5	9	20	C				
155	Concession St / Leroy Grant Drive (N)	TWSC	SBR	5	5	5	0	0	A				
155	Concession St / Leroy Grant Drive (N)	TWSC	WBT	951	0	0	0	0	A				
155	Concession St / Leroy Grant Drive (N)	TWSC	WBR	41	0	0	0	1	A				
160	Concession St / Macdonnell St	Signalized	NBL	31	10	35	23	30	C	45.0	D	15.0	B
160	Concession St / Macdonnell St	Signalized	NBT	26	10	35	26	35	C				
160	Concession St / Macdonnell St	Signalized	NBR	83	10	35	7	14	B				
160	Concession St / Macdonnell St	Signalized	SBR	68	5	20	5	9	A				
160	Concession St / Macdonnell St	Signalized	EBL	58	75	80	36	45	D				
160	Concession St / Macdonnell St	Signalized	EBT	783	75	80	8	14	B				
160	Concession St / Macdonnell St	Signalized	EBR	64	75	80	7	12	B				
160	Concession St / Macdonnell St	Signalized	WBL	17	85	85	35	44	D				
160	Concession St / Macdonnell St	Signalized	WBT	886	85	85	8	13	B				
160	Concession St / Macdonnell St	Signalized	WBR	0	85	85	0	0	A				
170	Concession St / Connaught St	TWSC	SBL	0	0	5	0	0	A	28.0	D	6.7	A
170	Concession St / Connaught St	TWSC	SBR	14	0	5	18	28	D				
170	Concession St / Connaught St	TWSC	EBL	0	10	95	0	0	A				
170	Concession St / Connaught St	TWSC	EBT	860	10	95	2	5	A				
170	Concession St / Connaught St	TWSC	WBT	877	50	115	4	8	A				
170	Concession St / Connaught St	TWSC	WBR	0	50	115	0	0	A				
180	Concession St / Victoria St	Signalized	NBL	54	20	50	29	38	D	38.0	D	15.9	B
180	Concession St / Victoria St	Signalized	NBT	31	20	50	28	36	D				
180	Concession St / Victoria St	Signalized	NBR	81	20	50	20	29	C				
180	Concession St / Victoria St	Signalized	SBL	9	5	15	27	35	C				
180	Concession St / Victoria St	Signalized	SBT	24	5	15	27	33	C				
180	Concession St / Victoria St	Signalized	SBR	35	5	15	2	12	B				
180	Concession St / Victoria St	Signalized	EBL	56	115	115	24	32	C				
180	Concession St / Victoria St	Signalized	EBT	793	115	115	8	14	B				
180	Concession St / Victoria St	Signalized	EBR	20	115	115	11	20	B				
180	Concession St / Victoria St	Signalized	WBL	48	85	90	21	28	C				
180	Concession St / Victoria St	Signalized	WBT	790	85	90	7	12	B				
180	Concession St / Victoria St	Signalized	WBR	15	85	90	0	1	A				
190	Concession St / Nelson St	TWSC	NBL	0	0	0	0	0	A	6.0	A	3.5	A
190	Concession St / Nelson St	TWSC	NBT	0	0	0	0	0	A				
190	Concession St / Nelson St	TWSC	NBR	0	0	0	0	0	A				
190	Concession St / Nelson St	TWSC	SBL	0	0	5	0	0	A				
190	Concession St / Nelson St	TWSC	SBT	0	0	5	0	0	A				
190	Concession St / Nelson St	TWSC	SBR	12	0	5	0	6	A				
190	Concession St / Nelson St	TWSC	EBL	1	0	85	1	6	A				
190	Concession St / Nelson St	TWSC	EBT	824	0	85	1	2	A				
190	Concession St / Nelson St	TWSC	EBR	50	0	85	1	2	A				
190	Concession St / Nelson St	TWSC	WBL	4	0	95	0	5	A				
190	Concession St / Nelson St	TWSC	WBT	839	0	95	2	5	A				
190	Concession St / Nelson St	TWSC	WBR	0	0	95	0	0	A				

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Node	Location	Control	Mvmt.	Volume (All)	Queue (m)		Stop Delay (s)	Delay (s)	LOS	Critical Mvmt		Intersection	
					50th	95th				Delay	LOS	Delay	LOS
200	Concession St / Kingscourt Av	TWSC	SBL	0	0	15	0	0	A	15.0	B	3.6	A
200	Concession St / Kingscourt Av	TWSC	SBR	16	0	15	6	15	B				
200	Concession St / Kingscourt Av	TWSC	EBL	4	0	95	6	13	B				
200	Concession St / Kingscourt Av	TWSC	EBT	819	0	95	2	4	A				
200	Concession St / Kingscourt Av	TWSC	WBT	828	0	95	1	3	A				
200	Concession St / Kingscourt Av	TWSC	WBR	0	0	95	0	0	A				
210	Concession St / Fergus St	TWSC	SBL	11	0	5	23	35	D	35.0	D	4.2	A
210	Concession St / Fergus St	TWSC	SBR	0	0	5	0	0	A				
210	Concession St / Fergus St	TWSC	EBL	5	0	100	10	14	B				
210	Concession St / Fergus St	TWSC	EBT	813	0	100	3	6	A				
210	Concession St / Fergus St	TWSC	WBT	827	0	40	1	2	A				
210	Concession St / Fergus St	TWSC	WBR	3	0	40	0	0	A				
220	Concession St / Grey St	TWSC	SBL	0	0	5	0	0	A	15.0	B	7.5	A
220	Concession St / Grey St	TWSC	SBR	15	0	5	4	11	B				
220	Concession St / Grey St	TWSC	EBL	4	45	105	9	15	B				
220	Concession St / Grey St	TWSC	EBT	819	45	105	9	15	B				
220	Concession St / Grey St	TWSC	WBT	816	0	0	0	0	A				
220	Concession St / Grey St	TWSC	WBR	5	0	0	0	0	A				
230	Concession St / Alfred St	Signalized	NBL	213	35	90	20	31	C	31.0	C	16.5	B
230	Concession St / Alfred St	Signalized	NBT	37	35	90	19	29	C				
230	Concession St / Alfred St	Signalized	NBR	38	35	90	11	19	B				
230	Concession St / Alfred St	Signalized	SBL	0	5	15	0	0	A				
230	Concession St / Alfred St	Signalized	SBT	34	5	15	18	25	C				
230	Concession St / Alfred St	Signalized	SBR	21	5	15	5	10	A				
230	Concession St / Alfred St	Signalized	EBL	27	55	60	17	23	C				
230	Concession St / Alfred St	Signalized	EBT	545	55	60	10	13	B				
230	Concession St / Alfred St	Signalized	EBR	251	55	60	2	4	A				
230	Concession St / Alfred St	Signalized	WBL	39	65	125	12	19	B				
230	Concession St / Alfred St	Signalized	WBT	591	65	125	12	18	B				
230	Concession St / Alfred St	Signalized	WBR	0	65	125	0	0	A				
240	Concession St / Lansdowne St	TWSC	NBL	0	0	0	0	0	A	7.0	A	1.7	A
240	Concession St / Lansdowne St	TWSC	NBR	0	0	0	0	0	A				
240	Concession St / Lansdowne St	TWSC	EBT	532	0	5	0	1	A				
240	Concession St / Lansdowne St	TWSC	EBR	0	0	5	0	0	A				
240	Concession St / Lansdowne St	TWSC	WBL	40	0	55	3	7	A				
240	Concession St / Lansdowne St	TWSC	WBT	610	0	55	1	2	A				
250	Concession St / Division St	Signalized	NBL	64	90	110	28	37	D	57.0	E	29.2	C
250	Concession St / Division St	Signalized	NBT	552	90	110	19	25	C				
250	Concession St / Division St	Signalized	NBR	0	90	110	0	0	A				
250	Concession St / Division St	Signalized	SBL	26	50	140	33	44	D				
250	Concession St / Division St	Signalized	SBT	399	50	140	17	23	C				
250	Concession St / Division St	Signalized	SBR	187	50	140	4	9	A				
250	Concession St / Division St	Signalized	EBL	219	45	105	23	32	C				
250	Concession St / Division St	Signalized	EBT	228	45	105	12	17	B				
250	Concession St / Division St	Signalized	EBR	63	45	105	3	6	A				
250	Concession St / Division St	Signalized	WBL	11	90	210	42	52	D				
250	Concession St / Division St	Signalized	WBT	379	90	210	47	57	E				
250	Concession St / Division St	Signalized	WBR	32	90	210	38	48	D				



Williamsville Operational Analysis  
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Measures of Effectiveness Details



Node	Location	Control	Mvmt.	Volume (All)	Queue (m)		Stop Delay (s)	Delay (s)	LOS	Critical Mvmt		Intersection	
					50th	95th				Delay	LOS	Delay	LOS
260	Adelaide St / Division St	TWSC	NBL	0	0	105	0	0	A	23.0	C	4.0	A
260	Adelaide St / Division St	TWSC	NBT	613	0	105	3	6	A				
260	Adelaide St / Division St	TWSC	NBR	0	0	105	0	0	A				
260	Adelaide St / Division St	TWSC	SBL	6	0	30	2	5	A				
260	Adelaide St / Division St	TWSC	SBT	441	0	30	0	1	A				
260	Adelaide St / Division St	TWSC	SBR	25	0	30	0	1	A				
260	Adelaide St / Division St	TWSC	EBL	3	0	5	10	23	C				
260	Adelaide St / Division St	TWSC	EBT	0	0	5	0	0	A				
260	Adelaide St / Division St	TWSC	EBR	0	0	5	0	0	A				
260	Adelaide St / Division St	TWSC	WBL	3	0	5	8	18	C				
260	Adelaide St / Division St	TWSC	WBT	6	0	5	6	16	C				
260	Adelaide St / Division St	TWSC	WBR	0	0	5	0	0	A				
270	Stanley St / Division St	TWSC	NBL	3	0	20	0	1	A	19.0	C	1.5	A
270	Stanley St / Division St	TWSC	NBT	602	0	20	0	1	A				
270	Stanley St / Division St	TWSC	SBT	376	0	30	1	2	A				
270	Stanley St / Division St	TWSC	SBR	69	0	30	0	1	A				
270	Stanley St / Division St	TWSC	EBL	8	0	5	4	19	C				
270	Stanley St / Division St	TWSC	EBR	6	0	5	1	7	A				
280	Pine St / Division St	Signalized	NBL	30	20	75	8	14	B	32.0	C	9.3	A
280	Pine St / Division St	Signalized	NBT	539	20	75	3	6	A				
280	Pine St / Division St	Signalized	NBR	14	20	75	4	6	A				
280	Pine St / Division St	Signalized	SBL	32	20	70	7	14	B				
280	Pine St / Division St	Signalized	SBT	345	20	70	5	9	A				
280	Pine St / Division St	Signalized	SBR	6	20	70	2	6	A				
280	Pine St / Division St	Signalized	EBL	0	5	20	0	0	A				
280	Pine St / Division St	Signalized	EBT	28	5	20	25	30	C				
280	Pine St / Division St	Signalized	EBR	26	5	20	4	10	A				
280	Pine St / Division St	Signalized	WBL	5	10	25	24	32	C				
280	Pine St / Division St	Signalized	WBT	43	10	25	22	28	C				
280	Pine St / Division St	Signalized	WBR	66	10	25	6	12	B				
290	Quebec St / Division St	TWSC	NBT	586	0	35	0	1	A	12.0	B	1.6	A
290	Quebec St / Division St	TWSC	NBR	0	0	35	0	0	A				
290	Quebec St / Division St	TWSC	SBL	8	0	70	3	6	A				
290	Quebec St / Division St	TWSC	SBT	368	0	70	1	2	A				
290	Quebec St / Division St	TWSC	WBL	14	0	5	4	12	B				
290	Quebec St / Division St	TWSC	WBR	0	0	5	0	0	A				
300	York St / Division St	Signalized	NBL	7	35	35	6	8	A	32.0	C	7.2	A
300	York St / Division St	Signalized	NBT	526	35	35	2	4	A				
300	York St / Division St	Signalized	NBR	12	35	35	2	3	A				
300	York St / Division St	Signalized	SBL	32	15	60	10	15	B				
300	York St / Division St	Signalized	SBT	349	15	60	4	6	A				
300	York St / Division St	Signalized	SBR	0	15	60	0	0	A				
300	York St / Division St	Signalized	EBL	0	5	15	0	0	A				
300	York St / Division St	Signalized	EBT	28	5	15	23	28	C				
300	York St / Division St	Signalized	EBR	1	5	15	0	0	A				
300	York St / Division St	Signalized	WBL	32	10	25	25	31	C				
300	York St / Division St	Signalized	WBT	11	10	25	25	32	C				
300	York St / Division St	Signalized	WBR	58	10	25	6	13	B				
310	Main St / Division St	TWSC	NBT	545	20	60	3	6	A	13.0	B	3.7	A
310	Main St / Division St	TWSC	NBR	0	20	60	0	0	A				
310	Main St / Division St	TWSC	SBL	7	35	35	4	6	A				
310	Main St / Division St	TWSC	SBT	377	35	35	0	0	A				
310	Main St / Division St	TWSC	WBL	9	0	5	4	13	B				
310	Main St / Division St	TWSC	WBR	0	0	5	0	0	A				

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Measures of Effectiveness Details



Node	Location	Control	Mvmt.	Volume (All)	Queue (m)		Stop Delay (s)	Delay (s)	LOS	Critical Mvmt		Intersection	
					50th	95th				Delay	LOS	Delay	LOS
320	Hamilton St / Division St	TWSC	NBL	1	0	35	0	0	A	6.0	A	0.6	A
320	Hamilton St / Division St	TWSC	NBT	544	0	35	0	1	A				
320	Hamilton St / Division St	TWSC	SBT	362	0	0	0	0	A				
320	Hamilton St / Division St	TWSC	SBR	24	0	0	0	0	A				
320	Hamilton St / Division St	TWSC	EBL	0	0	5	0	0	A				
320	Hamilton St / Division St	TWSC	EBR	5	0	5	0	6	A				
330	Raglan St / Division St	TWSC	NBT	542	0	0	0	0	A	13.0	B	0.1	A
330	Raglan St / Division St	TWSC	NBR	8	0	0	0	0	A				
330	Raglan St / Division St	TWSC	SBL	0	0	0	0	0	A				
330	Raglan St / Division St	TWSC	SBT	368	0	0	0	0	A				
330	Raglan St / Division St	TWSC	WBL	11	0	5	3	10	A				
330	Raglan St / Division St	TWSC	WBR	2	0	5	5	13	B				
340	Elm St / Division St	TWSC	NBL	32	0	15	1	3	A	10.0	A	0.2	A
340	Elm St / Division St	TWSC	NBT	547	0	15	0	0	A				
340	Elm St / Division St	TWSC	SBT	347	0	0	0	0	A				
340	Elm St / Division St	TWSC	SBR	31	0	0	0	1	A				
340	Elm St / Division St	TWSC	EBL	5	0	5	3	10	A				
340	Elm St / Division St	TWSC	EBR	0	0	5	0	0	A				
350	Ellice St / Division St	TWSC	NBT	565	0	45	0	0	A	9.0	A	0.2	A
350	Ellice St / Division St	TWSC	NBR	2	0	45	0	0	A				
350	Ellice St / Division St	TWSC	SBL	6	0	0	3	6	A				
350	Ellice St / Division St	TWSC	SBT	341	0	0	0	0	A				
350	Ellice St / Division St	TWSC	WBL	0	0	5	0	0	A				
350	Ellice St / Division St	TWSC	WBR	13	0	5	1	9	A				
360	Colborne St / Division St	TWSC	NBL	1	0	20	0	1	A	11.0	B	0.7	A
360	Colborne St / Division St	TWSC	NBT	540	0	20	0	0	A				
360	Colborne St / Division St	TWSC	NBR	0	0	20	0	0	A				
360	Colborne St / Division St	TWSC	SBL	6	0	30	2	5	A				
360	Colborne St / Division St	TWSC	SBT	335	0	30	1	1	A				
360	Colborne St / Division St	TWSC	SBR	0	0	30	0	0	A				
360	Colborne St / Division St	TWSC	EBL	15	0	5	3	11	B				
360	Colborne St / Division St	TWSC	EBT	1	0	5	0	0	A				
360	Colborne St / Division St	TWSC	EBR	0	0	5	0	0	A				
360	Colborne St / Division St	TWSC	WBL	0	0	5	0	0	A				
360	Colborne St / Division St	TWSC	WBT	0	0	5	0	0	A				
360	Colborne St / Division St	TWSC	WBR	13	0	5	3	11	B				
370	Queen St / Division St	Signalized	NBT	199	20	50	8	11	B	29.0	C	17.6	B
370	Queen St / Division St	Signalized	NBR	108	20	50	1	10	A				
370	Queen St / Division St	Signalized	SBL	93	40	80	19	29	C				
370	Queen St / Division St	Signalized	SBT	245	40	80	14	20	B				
370	Queen St / Division St	Signalized	WBL	440	50	95	15	27	C				
370	Queen St / Division St	Signalized	WBR	344	50	95	1	7	A				



Williamsville Operational Analysis

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Measures of Effectiveness Details

ID	Intersection Name	Control Type	Number of Vehicles	50th %'ile Queue (m)	95th %'ile Queue (m)	Avg. Vehicle Delay (sec)	Avg. Stop Delay (sec)	LOS
10	Princess St / Concession St	Signalized	2,554	39.9	64.5	27.5	21.9	C
20	Princess St / Regent St	TWSC	986	0.1	41.0	2.3	0.1	-
30	Princess St / Drayton Av	TWSC	931	0.0	51.4	1.8	0.1	-
40	Princess St / Macdonnell Av	Signalized	861	50.4	101.8	15.3	9.1	B
50	Princess St / Smith St	TWSC	712	29.0	31.7	0.9	0.3	-
60	Princess St / Victoria St	Signalized	852	8.5	49.5	6.7	3.6	A
70	Princess St / Nelson St	TWSC	767	0.3	0.3	2.1	0.2	-
80	Princess St / Albert St	Signalized	806	36.4	73.1	13.6	9.6	B
90	Princess St / Frontenac St	TWSC	747	0.0	0.1	0.9	0.0	-
100	Princess St / Alfred St	Signalized	1,071	45.3	68.6	23.4	17.0	C
110	Princess St / Chatham St	TWSC	736	0.0	21.6	1.6	0.0	-
120	Princess St / University Av	Signalized	719	11.4	56.4	5.1	2.1	A
130	Princess St / Division St	Signalized	938	18.4	46.0	17.2	12.2	B
140	Concession St / Drayton Av	TWSC	940	0.1	166.6	10.9	5.8	-
150	Concession St / Leroy Grant Dr (S)	TWSC	908	44.9	74.8	8.0	4.0	-
155	Concession St / Leroy Grant Drive (N)	TWSC	706	0.2	1.0	0.5	0.1	-
160	Concession St / Macdonnell St	Signalized	1,528	50.9	71.6	10.5	6.7	B
170	Concession St / Connaught St	TWSC	1,320	0.0	51.2	1.7	0.6	-
180	Concession St / Victoria St	Signalized	1,389	36.8	83.6	11.7	7.5	B
190	Concession St / Nelson St	TWSC	1,274	0.1	55.1	1.9	0.7	-
200	Concession St / Kingscourt Av	TWSC	1,256	0.2	30.9	1.2	0.4	-
210	Concession St / Fergus St	TWSC	1,286	0.2	33.2	2.0	1.2	-
220	Concession St / Grey St	TWSC	1,327	12.8	53.8	6.4	3.5	-
230	Concession St / Alfred St	Signalized	1,386	39.8	67.3	13.0	8.1	B
240	Concession St / Lansdowne St	TWSC	966	0.0	10.4	0.6	0.0	-
250	Concession St / Division St	Signalized	1,638	41.4	102.4	21.2	15.4	C
260	Adelaide St / Division St	TWSC	698	0.0	29.6	0.8	0.2	-
270	Stanley St / Division St	TWSC	762	0.5	17.4	2.0	0.8	-
280	Pine St / Division St	Signalized	812	15.9	46.9	7.8	4.7	A
290	Quebec St / Division St	TWSC	711	0.0	29.9	0.8	0.0	-
300	York St / Division St	Signalized	781	14.2	38.5	7.5	5.0	A
310	Main St / Division St	TWSC	634	21.2	28.9	1.3	0.4	-
320	Hamilton St / Division St	TWSC	613	0.0	0.0	0.1	0.0	-
330	Raglan St / Division St	TWSC	617	0.0	0.0	0.1	0.0	-
340	Elm St / Division St	TWSC	607	0.0	0.1	0.1	0.0	-
350	Ellice St / Division St	TWSC	609	0.0	0.1	0.8	0.0	-
360	Colborne St / Division St	TWSC	605	0.0	22.5	1.5	0.6	-
370	Queen St / Division St	Signalized	833	25.7	48.4	13.8	8.0	B
<b>Total</b>			<b>36,886</b>	<b>544</b>	<b>1,671</b>	<b>245</b>	<b>150</b>	



Williamsville Operational Analysis

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Measures of Effectiveness Details

Node	Location	Control	Mvmt.	Volume (All)	Queue (m)		Stop Delay (s)	Delay (s)	LOS	Critical Mvmt		Intersection	
					50th	95th				Delay	LOS	Delay	LOS
10	Princess St / Concession St	Signalized	NBL	143	25	40	39	46	D	46.0	D	27.5	C
10	Princess St / Concession St	Signalized	NBT	103	25	40	36	43	D				
10	Princess St / Concession St	Signalized	NBR	31	25	40	0	2	A				
10	Princess St / Concession St	Signalized	SBL	494	60	90	30	38	D				
10	Princess St / Concession St	Signalized	SBT	485	60	90	29	37	D				
10	Princess St / Concession St	Signalized	SBR	29	60	90	17	22	C				
10	Princess St / Concession St	Signalized	EBT	422	35	60	26	32	C				
10	Princess St / Concession St	Signalized	EBR	184	35	60	1	2	A				
10	Princess St / Concession St	Signalized	WBT	232	20	40	26	32	C				
10	Princess St / Concession St	Signalized	WBR	334	20	40	0	0	A				
10	Princess St / Concession St	Signalized	WBL	97	20	40	2	5	A				
20	Princess St / Regent St	TWSC	NBL	2	5	10	3	10	A	13.0	B	2.3	A
20	Princess St / Regent St	TWSC	NBR	22	5	10	4	13	B				
20	Princess St / Regent St	TWSC	EBT	620	0	60	0	3	A				
20	Princess St / Regent St	TWSC	EBR	50	0	60	0	1	A				
20	Princess St / Regent St	TWSC	WBL	2	0	0	0	5	A				
20	Princess St / Regent St	TWSC	WBT	290	0	0	0	0	A				
30	Princess St / Drayton Av	TWSC	SBL	0	0	5	0	0	A	7.0	A	1.8	A
30	Princess St / Drayton Av	TWSC	SBR	8	0	5	1	7	A				
30	Princess St / Drayton Av	TWSC	EBL	90	0	75	1	3	A				
30	Princess St / Drayton Av	TWSC	EBT	547	0	75	0	2	A				
30	Princess St / Drayton Av	TWSC	WBT	286	0	0	0	1	A				
30	Princess St / Drayton Av	TWSC	WBR	0	0	0	0	0	A				
40	Princess St / Macdonnell Av	Signalized	NBL	44	5	20	12	18	B	18.0	B	15.3	B
40	Princess St / Macdonnell Av	Signalized	NBT	21	5	20	9	14	B				
40	Princess St / Macdonnell Av	Signalized	NBR	17	5	20	5	10	A				
40	Princess St / Macdonnell Av	Signalized	SBL	11	40	40	11	15	B				
40	Princess St / Macdonnell Av	Signalized	SBT	18	40	40	11	14	B				
40	Princess St / Macdonnell Av	Signalized	SBR	34	40	40	2	10	A				
40	Princess St / Macdonnell Av	Signalized	EBL	8	70	145	8	13	B				
40	Princess St / Macdonnell Av	Signalized	EBT	467	70	145	10	17	B				
40	Princess St / Macdonnell Av	Signalized	EBR	27	70	145	9	15	B				
40	Princess St / Macdonnell Av	Signalized	WBL	0	25	50	0	0	A				
40	Princess St / Macdonnell Av	Signalized	WBT	210	25	50	8	13	B				
40	Princess St / Macdonnell Av	Signalized	WBR	4	25	50	1	5	A				
50	Princess St / Smith St	TWSC	SBL	0	40	40	0	0	A	12.0	B	0.9	A
50	Princess St / Smith St	TWSC	SBR	20	40	40	1	12	B				
50	Princess St / Smith St	TWSC	EBL	0	40	40	0	0	A				
50	Princess St / Smith St	TWSC	EBT	496	40	40	0	0	A				
50	Princess St / Smith St	TWSC	WBT	196	0	10	1	2	A				
50	Princess St / Smith St	TWSC	WBR	0	0	10	0	0	A				
60	Princess St / Victoria St	Signalized	NBL	20	10	20	13	20	B	26.0	C	6.7	A
60	Princess St / Victoria St	Signalized	NBT	33	10	20	19	26	C				
60	Princess St / Victoria St	Signalized	NBR	43	10	20	7	13	B				
60	Princess St / Victoria St	Signalized	SBL	2	5	20	18	22	C				
60	Princess St / Victoria St	Signalized	SBT	61	5	20	14	19	B				
60	Princess St / Victoria St	Signalized	SBR	0	5	20	0	0	A				
60	Princess St / Victoria St	Signalized	EBL	0	10	65	0	0	A				
60	Princess St / Victoria St	Signalized	EBT	486	10	65	1	4	A				
60	Princess St / Victoria St	Signalized	EBR	6	10	65	0	5	A				
60	Princess St / Victoria St	Signalized	WBL	20	5	35	7	10	A				
60	Princess St / Victoria St	Signalized	WBT	169	5	35	2	3	A				
60	Princess St / Victoria St	Signalized	WBR	12	5	35	0	2	A				
70	Princess St / Nelson St	TWSC	NBL	0	0	5	0	0	A	16.0	C	2.1	A
70	Princess St / Nelson St	TWSC	NBT	0	0	5	0	0	A				
70	Princess St / Nelson St	TWSC	NBR	8	0	5	2	9	A				
70	Princess St / Nelson St	TWSC	SBL	13	5	5	4	16	C				
70	Princess St / Nelson St	TWSC	SBT	4	5	5	8	16	C				
70	Princess St / Nelson St	TWSC	SBR	25	5	5	1	9	A				
70	Princess St / Nelson St	TWSC	EBL	11	0	0	0	2	A				
70	Princess St / Nelson St	TWSC	EBT	522	0	0	0	2	A				
70	Princess St / Nelson St	TWSC	EBR	2	0	0	0	1	A				
70	Princess St / Nelson St	TWSC	WBL	0	0	0	0	0	A				
70	Princess St / Nelson St	TWSC	WBT	182	0	0	0	0	A				
70	Princess St / Nelson St	TWSC	WBR	0	0	0	0	0	A				

Williamsville Operational Analysis

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Measures of Effectiveness Details



Node	Location	Control	Mvmt.	Volume (All)	Queue (m)		Stop Delay (s)	Delay (s)	LOS	Critical Mvmt		Intersection	
					50th	95th				Delay	LOS	Delay	LOS
80	Princess St / Albert St	Signalized	NBL	12	5	10	12	16	B	23.0	C	13.6	B
80	Princess St / Albert St	Signalized	NBT	16	5	10	14	19	B				
80	Princess St / Albert St	Signalized	NBR	25	5	10	1	6	A				
80	Princess St / Albert St	Signalized	SBL	0	0	10	0	0	A				
80	Princess St / Albert St	Signalized	SBT	29	0	10	10	12	B				
80	Princess St / Albert St	Signalized	SBR	0	0	10	0	0	A				
80	Princess St / Albert St	Signalized	EBL	0	50	95	0	0	A				
80	Princess St / Albert St	Signalized	EBT	532	50	95	11	15	B				
80	Princess St / Albert St	Signalized	EBR	14	50	95	13	17	B				
80	Princess St / Albert St	Signalized	WBL	8	10	35	17	23	C				
80	Princess St / Albert St	Signalized	WBT	170	10	35	5	9	A				
80	Princess St / Albert St	Signalized	WBR	0	10	35	0	0	A				
90	Princess St / Frontenac St	TWSC	NBL	0	0	0	0	0	A	11.0	B	0.9	A
90	Princess St / Frontenac St	TWSC	NBT	0	0	0	0	0	A				
90	Princess St / Frontenac St	TWSC	NBR	0	0	0	0	0	A				
90	Princess St / Frontenac St	TWSC	SBL	0	0	5	0	0	A				
90	Princess St / Frontenac St	TWSC	SBT	5	0	5	1	11	B				
90	Princess St / Frontenac St	TWSC	SBR	12	0	5	0	6	A				
90	Princess St / Frontenac St	TWSC	EBL	8	0	0	0	1	A				
90	Princess St / Frontenac St	TWSC	EBT	539	0	0	0	1	A				
90	Princess St / Frontenac St	TWSC	EBR	4	0	0	0	0	A				
90	Princess St / Frontenac St	TWSC	WBL	3	0	0	0	0	A				
90	Princess St / Frontenac St	TWSC	WBT	176	0	0	0	0	A				
90	Princess St / Frontenac St	TWSC	WBR	0	0	0	0	0	A				
100	Princess St / Alfred St	Signalized	NBL	20	20	40	12	18	B	33.0	C	23.4	C
100	Princess St / Alfred St	Signalized	NBT	106	20	40	12	17	B				
100	Princess St / Alfred St	Signalized	NBR	70	20	40	4	10	A				
100	Princess St / Alfred St	Signalized	SBL	27	20	45	17	26	C				
100	Princess St / Alfred St	Signalized	SBT	129	20	45	14	20	B				
100	Princess St / Alfred St	Signalized	SBR	34	20	45	6	11	B				
100	Princess St / Alfred St	Signalized	EBL	42	70	95	17	23	C				
100	Princess St / Alfred St	Signalized	EBT	477	70	95	22	29	C				
100	Princess St / Alfred St	Signalized	EBR	6	70	95	19	27	C				
100	Princess St / Alfred St	Signalized	WBL	6	25	45	26	33	C				
100	Princess St / Alfred St	Signalized	WBT	138	25	45	18	24	C				
100	Princess St / Alfred St	Signalized	WBR	16	25	45	1	3	A				
110	Princess St / Chatham St	TWSC	SBL	0	0	0	0	0	A	3.0	A	1.6	A
110	Princess St / Chatham St	TWSC	SBR	0	0	0	0	0	A				
110	Princess St / Chatham St	TWSC	EBL	8	0	15	0	3	A				
110	Princess St / Chatham St	TWSC	EBT	565	0	15	0	2	A				
110	Princess St / Chatham St	TWSC	WBT	159	0	45	0	0	A				
110	Princess St / Chatham St	TWSC	WBR	4	0	45	0	0	A				
120	Princess St / University Av	Signalized	NBL	22	5	10	15	20	B	20.0	B	5.1	A
120	Princess St / University Av	Signalized	NBR	23	5	10	2	7	A				
120	Princess St / University Av	Signalized	EBT	481	15	70	2	5	A				
120	Princess St / University Av	Signalized	EBR	52	15	70	1	4	A				
120	Princess St / University Av	Signalized	WBL	0	0	20	0	0	A				
120	Princess St / University Av	Signalized	WBT	141	0	20	1	3	A				
120	Princess St / University Av	Signalized	NBT	0	5	10	0	0	A				
120	Princess St / University Av	Signalized	SBL	0	0	0	0	0	A				
120	Princess St / University Av	Signalized	SBT	0	0	0	0	0	A				
120	Princess St / University Av	Signalized	SBR	0	0	0	0	0	A				
120	Princess St / University Av	Signalized	EBL	0	15	70	0	0	A				
120	Princess St / University Av	Signalized	WBR	0	0	20	0	0	A				
130	Princess St / Division St	Signalized	NBL	12	5	20	14	27	C	27.0	C	17.2	B
130	Princess St / Division St	Signalized	NBT	50	5	20	11	17	B				
130	Princess St / Division St	Signalized	NBR	0	5	20	0	0	A				
130	Princess St / Division St	Signalized	SBL	143	5	45	4	6	A				
130	Princess St / Division St	Signalized	SBT	99	5	45	3	4	A				
130	Princess St / Division St	Signalized	SBR	131	5	45	0	1	A				
130	Princess St / Division St	Signalized	EBL	138	30	50	19	27	C				
130	Princess St / Division St	Signalized	EBT	357	30	50	20	27	C				
130	Princess St / Division St	Signalized	EBR	8	30	50	13	22	C				



Williamsville Operational Analysis

2036 No Mitigation - No Williamsville Growth - AM Peak

Measures of Effectiveness Details

Node	Location	Control	Mvmt.	Volume (All)	Queue (m)		Stop Delay (s)	Delay (s)	LOS	Critical Mvmt		Intersection	
					50th	95th				Delay	LOS	Delay	LOS
140	Concession St / Drayton Av	TWSC	NBR	21	5	20	77	88	F	88.0	F	10.9	B
140	Concession St / Drayton Av	TWSC	EBT	911	0	170	4	9	A				
140	Concession St / Drayton Av	TWSC	EBR	8	0	170	19	28	D				
150	Concession St / Leroy Grant Dr (S)	TWSC	SBL	2	0	5	18	30	D	30.0	D	8.0	A
150	Concession St / Leroy Grant Dr (S)	TWSC	EBL	32	45	75	2	6	A				
150	Concession St / Leroy Grant Dr (S)	TWSC	EBT	874	45	75	4	8	A				
155	Concession St / Leroy Grant Drive (N)	TWSC	NBL	20	5	10	2	10	A	11.0	B	0.5	A
155	Concession St / Leroy Grant Drive (N)	TWSC	NBT	12	5	10	3	11	B				
155	Concession St / Leroy Grant Drive (N)	TWSC	SBT	2	0	5	0	8	A				
155	Concession St / Leroy Grant Drive (N)	TWSC	SBR	71	0	5	0	0	A				
155	Concession St / Leroy Grant Drive (N)	TWSC	WBT	576	0	0	0	0	A				
155	Concession St / Leroy Grant Drive (N)	TWSC	WBR	25	0	0	0	1	A				
160	Concession St / Macdonnell St	Signalized	NBL	0	0	5	0	0	A	38.0	D	10.5	B
160	Concession St / Macdonnell St	Signalized	NBT	0	0	5	0	0	A				
160	Concession St / Macdonnell St	Signalized	NBR	9	0	5	7	12	B				
160	Concession St / Macdonnell St	Signalized	SBR	41	0	5	1	4	A				
160	Concession St / Macdonnell St	Signalized	EBL	36	75	80	11	17	B				
160	Concession St / Macdonnell St	Signalized	EBT	701	75	80	7	12	B				
160	Concession St / Macdonnell St	Signalized	EBR	140	75	80	6	10	A				
160	Concession St / Macdonnell St	Signalized	WBL	39	20	65	30	38	D				
160	Concession St / Macdonnell St	Signalized	WBT	562	20	65	5	7	A				
160	Concession St / Macdonnell St	Signalized	WBR	0	20	65	0	0	A				
170	Concession St / Connaught St	TWSC	SBL	8	0	5	6	14	B	14.0	B	1.7	A
170	Concession St / Connaught St	TWSC	SBR	7	0	5	3	9	A				
170	Concession St / Connaught St	TWSC	EBL	17	0	95	5	9	A				
170	Concession St / Connaught St	TWSC	EBT	694	0	95	1	2	A				
170	Concession St / Connaught St	TWSC	WBT	590	0	0	0	1	A				
170	Concession St / Connaught St	TWSC	WBR	4	0	0	0	0	A				
180	Concession St / Victoria St	Signalized	NBL	12	5	15	26	32	C	32.0	C	11.7	B
180	Concession St / Victoria St	Signalized	NBT	15	5	15	24	31	C				
180	Concession St / Victoria St	Signalized	NBR	11	5	15	3	9	A				
180	Concession St / Victoria St	Signalized	SBL	8	5	10	24	30	C				
180	Concession St / Victoria St	Signalized	SBT	26	5	10	23	28	C				
180	Concession St / Victoria St	Signalized	SBR	42	5	10	2	10	A				
180	Concession St / Victoria St	Signalized	EBL	20	35	90	9	13	B				
180	Concession St / Victoria St	Signalized	EBT	660	35	90	7	10	A				
180	Concession St / Victoria St	Signalized	EBR	6	35	90	11	17	B				
180	Concession St / Victoria St	Signalized	WBL	40	45	90	17	24	C				
180	Concession St / Victoria St	Signalized	WBT	548	45	90	6	11	B				
180	Concession St / Victoria St	Signalized	WBR	1	45	90	0	0	A				
190	Concession St / Nelson St	TWSC	NBL	11	0	5	15	25	C	25.0	C	1.9	A
190	Concession St / Nelson St	TWSC	NBT	0	0	5	0	0	A				
190	Concession St / Nelson St	TWSC	NBR	0	0	5	0	0	A				
190	Concession St / Nelson St	TWSC	SBL	0	5	5	0	0	A				
190	Concession St / Nelson St	TWSC	SBT	0	5	5	0	0	A				
190	Concession St / Nelson St	TWSC	SBR	19	5	5	0	6	A				
190	Concession St / Nelson St	TWSC	EBL	41	0	70	2	4	A				
190	Concession St / Nelson St	TWSC	EBT	636	0	70	0	1	A				
190	Concession St / Nelson St	TWSC	EBR	0	0	70	0	0	A				
190	Concession St / Nelson St	TWSC	WBL	11	0	40	3	6	A				
190	Concession St / Nelson St	TWSC	WBT	556	0	40	1	2	A				
190	Concession St / Nelson St	TWSC	WBR	0	0	40	0	0	A				



Williamsville Operational Analysis

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Measures of Effectiveness Details

Node	Location	Control	Mvmt.	Volume (All)	Queue (m)		Stop Delay (s)	Delay (s)	LOS	Critical Mvmt		Intersection	
					50th	95th				Delay	LOS	Delay	LOS
200	Concession St / Kingscourt Av	TWSC	SBL	36	5	15	11	19	C	19.0	C	1.2	A
200	Concession St / Kingscourt Av	TWSC	SBR	7	5	15	2	13	B				
200	Concession St / Kingscourt Av	TWSC	EBL	24	0	60	2	6	A				
200	Concession St / Kingscourt Av	TWSC	EBT	612	0	60	0	1	A				
200	Concession St / Kingscourt Av	TWSC	WBT	557	0	0	0	0	A				
200	Concession St / Kingscourt Av	TWSC	WBR	20	0	0	0	0	A				
210	Concession St / Fergus St	TWSC	SBL	44	5	15	18	28	D	28.0	D	2.0	A
210	Concession St / Fergus St	TWSC	SBR	0	5	15	0	0	A				
210	Concession St / Fergus St	TWSC	EBL	20	0	65	3	6	A				
210	Concession St / Fergus St	TWSC	EBT	627	0	65	1	2	A				
210	Concession St / Fergus St	TWSC	WBT	575	0	0	0	0	A				
210	Concession St / Fergus St	TWSC	WBR	20	0	0	0	0	A				
220	Concession St / Grey St	TWSC	SBL	42	5	20	43	54	F	54.0	F	6.4	A
220	Concession St / Grey St	TWSC	SBR	8	5	20	16	28	D				
220	Concession St / Grey St	TWSC	EBL	20	25	105	4	9	A				
220	Concession St / Grey St	TWSC	EBT	650	25	105	4	9	A				
220	Concession St / Grey St	TWSC	WBT	588	0	0	0	0	A				
220	Concession St / Grey St	TWSC	WBR	19	0	0	0	0	A				
230	Concession St / Alfred St	Signalized	NBL	155	20	50	20	30	C	30.0	C	13.0	B
230	Concession St / Alfred St	Signalized	NBT	8	20	50	21	27	C				
230	Concession St / Alfred St	Signalized	NBR	29	20	50	13	19	B				
230	Concession St / Alfred St	Signalized	SBL	0	5	15	0	0	A				
230	Concession St / Alfred St	Signalized	SBT	33	5	15	16	22	C				
230	Concession St / Alfred St	Signalized	SBR	37	5	15	3	10	A				
230	Concession St / Alfred St	Signalized	EBL	30	55	60	9	15	B				
230	Concession St / Alfred St	Signalized	EBT	492	55	60	6	10	A				
230	Concession St / Alfred St	Signalized	EBR	168	55	60	1	2	A				
230	Concession St / Alfred St	Signalized	WBL	22	30	95	12	18	B				
230	Concession St / Alfred St	Signalized	WBT	412	30	95	8	13	B				
230	Concession St / Alfred St	Signalized	WBR	0	30	95	0	0	A				
240	Concession St / Lansdowne St	TWSC	NBL	0	0	0	0	0	A	4.0	A	0.6	A
240	Concession St / Lansdowne St	TWSC	NBR	0	0	0	0	0	A				
240	Concession St / Lansdowne St	TWSC	EBT	523	0	15	0	1	A				
240	Concession St / Lansdowne St	TWSC	EBR	0	0	15	0	0	A				
240	Concession St / Lansdowne St	TWSC	WBL	8	0	5	1	4	A				
240	Concession St / Lansdowne St	TWSC	WBT	435	0	5	0	0	A				
250	Concession St / Division St	Signalized	NBL	14	25	60	20	28	C	35.0	C	21.2	C
250	Concession St / Division St	Signalized	NBT	221	25	60	17	23	C				
250	Concession St / Division St	Signalized	NBR	8	25	60	11	16	B				
250	Concession St / Division St	Signalized	SBL	30	50	130	18	26	C				
250	Concession St / Division St	Signalized	SBT	367	50	130	16	22	C				
250	Concession St / Division St	Signalized	SBR	199	50	130	2	6	A				
250	Concession St / Division St	Signalized	EBL	164	40	105	15	22	C				
250	Concession St / Division St	Signalized	EBT	350	40	105	13	18	B				
250	Concession St / Division St	Signalized	EBR	12	40	105	6	10	A				
250	Concession St / Division St	Signalized	WBL	21	40	75	27	35	C				
250	Concession St / Division St	Signalized	WBT	236	40	75	27	34	C				
250	Concession St / Division St	Signalized	WBR	16	40	75	15	22	C				



Williamsville Operational Analysis

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Measures of Effectiveness Details



Node	Location	Control	Mvmt.	Volume (All)	Queue (m)		Stop Delay (s)	Delay (s)	LOS	Critical Mvmt		Intersection	
					50th	95th				Delay	LOS	Delay	LOS
260	Adelaide St / Division St	TWSC	NBL	50	0	30	2	4	A	15.0	B	0.8	A
260	Adelaide St / Division St	TWSC	NBT	235	0	30	0	1	A				
260	Adelaide St / Division St	TWSC	NBR	4	0	30	0	0	A				
260	Adelaide St / Division St	TWSC	SBL	13	0	30	0	1	A				
260	Adelaide St / Division St	TWSC	SBT	379	0	30	0	0	A				
260	Adelaide St / Division St	TWSC	SBR	7	0	30	0	0	A				
260	Adelaide St / Division St	TWSC	EBL	4	0	5	1	9	A				
260	Adelaide St / Division St	TWSC	EBT	0	0	5	0	0	A				
260	Adelaide St / Division St	TWSC	EBR	0	0	5	0	0	A				
260	Adelaide St / Division St	TWSC	WBL	0	0	5	0	0	A				
260	Adelaide St / Division St	TWSC	WBT	2	0	5	3	15	B				
260	Adelaide St / Division St	TWSC	WBR	4	0	5	0	6	A				
270	Stanley St / Division St	TWSC	NBL	31	0	5	1	2	A	10.0	A	2.0	A
270	Stanley St / Division St	TWSC	NBT	282	0	5	0	0	A				
270	Stanley St / Division St	TWSC	SBT	377	0	30	1	2	A				
270	Stanley St / Division St	TWSC	SBR	0	0	30	0	0	A				
270	Stanley St / Division St	TWSC	EBL	7	5	5	1	8	A				
270	Stanley St / Division St	TWSC	EBR	65	5	5	3	10	A				
280	Pine St / Division St	Signalized	NBL	0	5	20	0	0	A	31.0	C	7.8	A
280	Pine St / Division St	Signalized	NBT	266	5	20	3	4	A				
280	Pine St / Division St	Signalized	NBR	6	5	20	4	5	A				
280	Pine St / Division St	Signalized	SBL	38	25	70	4	7	A				
280	Pine St / Division St	Signalized	SBT	404	25	70	4	8	A				
280	Pine St / Division St	Signalized	SBR	0	25	70	0	0	A				
280	Pine St / Division St	Signalized	EBL	0	5	10	0	0	A				
280	Pine St / Division St	Signalized	EBT	20	5	10	20	26	C				
280	Pine St / Division St	Signalized	EBR	4	5	10	4	9	A				
280	Pine St / Division St	Signalized	WBL	17	5	20	25	31	C				
280	Pine St / Division St	Signalized	WBT	8	5	20	19	26	C				
280	Pine St / Division St	Signalized	WBR	49	5	20	5	10	A				
290	Quebec St / Division St	TWSC	NBT	267	0	0	0	0	A	10.0	A	0.8	A
290	Quebec St / Division St	TWSC	NBR	2	0	0	0	0	A				
290	Quebec St / Division St	TWSC	SBL	4	0	50	0	0	A				
290	Quebec St / Division St	TWSC	SBT	420	0	50	0	1	A				
290	Quebec St / Division St	TWSC	WBL	14	0	5	2	10	A				
290	Quebec St / Division St	TWSC	WBR	4	0	5	1	7	A				
300	York St / Division St	Signalized	NBL	0	25	35	0	0	A	35.0	C	7.5	A
300	York St / Division St	Signalized	NBT	241	25	35	3	5	A				
300	York St / Division St	Signalized	NBR	10	25	35	0	2	A				
300	York St / Division St	Signalized	SBL	57	10	45	3	5	A				
300	York St / Division St	Signalized	SBT	378	10	45	3	5	A				
300	York St / Division St	Signalized	SBR	0	10	45	0	0	A				
300	York St / Division St	Signalized	EBL	0	5	15	0	0	A				
300	York St / Division St	Signalized	EBT	30	5	15	23	27	C				
300	York St / Division St	Signalized	EBR	6	5	15	20	28	C				
300	York St / Division St	Signalized	WBL	0	5	20	0	0	A				
300	York St / Division St	Signalized	WBT	31	5	20	28	35	C				
300	York St / Division St	Signalized	WBR	28	5	20	7	14	B				
310	Main St / Division St	TWSC	NBT	244	0	20	1	3	A	8.0	A	1.3	A
310	Main St / Division St	TWSC	NBR	0	0	20	0	0	A				
310	Main St / Division St	TWSC	SBL	16	35	35	0	2	A				
310	Main St / Division St	TWSC	SBT	368	35	35	0	0	A				
310	Main St / Division St	TWSC	WBL	0	0	5	0	0	A				
310	Main St / Division St	TWSC	WBR	6	0	5	1	8	A				



Williamsville Operational Analysis

2036 No Mitigation - No Williamsville Growth - AM Peak

Measures of Effectiveness Details

Node	Location	Control	Mvmt.	Volume (All)	Queue (m)		Stop Delay (s)	Delay (s)	LOS	Critical Mvmt		Intersection	
					50th	95th				Delay	LOS	Delay	LOS
320	Hamilton St / Division St	TWSC	NBL	0	0	0	0	0	A	8.0	A	0.1	A
320	Hamilton St / Division St	TWSC	NBT	241	0	0	0	0	A				
320	Hamilton St / Division St	TWSC	SBT	368	0	0	0	0	A				
320	Hamilton St / Division St	TWSC	SBR	0	0	0	0	0	A				
320	Hamilton St / Division St	TWSC	EBL	4	0	5	1	8	A				
320	Hamilton St / Division St	TWSC	EBR	0	0	5	0	0	A				
330	Raglan St / Division St	TWSC	NBT	237	0	0	0	0	A	7.0	A	0.1	A
330	Raglan St / Division St	TWSC	NBR	8	0	0	0	0	A				
330	Raglan St / Division St	TWSC	SBL	6	0	0	0	1	A				
330	Raglan St / Division St	TWSC	SBT	362	0	0	0	0	A				
330	Raglan St / Division St	TWSC	WBL	0	0	5	0	0	A				
330	Raglan St / Division St	TWSC	WBR	4	0	5	0	7	A				
340	Elm St / Division St	TWSC	NBL	0	0	0	0	0	A	8.0	A	0.1	A
340	Elm St / Division St	TWSC	NBT	237	0	0	0	0	A				
340	Elm St / Division St	TWSC	SBT	362	0	0	0	0	A				
340	Elm St / Division St	TWSC	SBR	0	0	0	0	0	A				
340	Elm St / Division St	TWSC	EBL	8	0	5	1	8	A				
340	Elm St / Division St	TWSC	EBR	0	0	5	0	0	A				
350	Ellice St / Division St	TWSC	NBT	229	0	0	0	0	A	9.0	A	0.8	A
350	Ellice St / Division St	TWSC	NBR	6	0	0	0	0	A				
350	Ellice St / Division St	TWSC	SBL	6	0	0	0	2	A				
350	Ellice St / Division St	TWSC	SBT	356	0	0	0	1	A				
350	Ellice St / Division St	TWSC	WBL	4	0	5	1	9	A				
350	Ellice St / Division St	TWSC	WBR	8	0	5	0	7	A				
360	Colborne St / Division St	TWSC	NBL	0	0	20	0	0	A	14.0	B	1.5	A
360	Colborne St / Division St	TWSC	NBT	225	0	20	0	0	A				
360	Colborne St / Division St	TWSC	NBR	0	0	20	0	0	A				
360	Colborne St / Division St	TWSC	SBL	11	0	25	1	2	A				
360	Colborne St / Division St	TWSC	SBT	349	0	25	1	2	A				
360	Colborne St / Division St	TWSC	SBR	0	0	25	0	0	A				
360	Colborne St / Division St	TWSC	EBL	6	0	5	1	8	A				
360	Colborne St / Division St	TWSC	EBT	2	0	5	3	14	B				
360	Colborne St / Division St	TWSC	EBR	0	0	5	0	0	A				
360	Colborne St / Division St	TWSC	WBL	0	0	5	0	0	A				
360	Colborne St / Division St	TWSC	WBT	8	0	5	2	11	B				
360	Colborne St / Division St	TWSC	WBR	4	0	5	0	8	A				
370	Queen St / Division St	Signalized	NBT	64	15	25	8	10	A	20.0	B	13.8	B
370	Queen St / Division St	Signalized	NBR	125	15	25	1	10	A				
370	Queen St / Division St	Signalized	SBL	109	40	80	13	20	B				
370	Queen St / Division St	Signalized	SBT	246	40	80	14	20	B				
370	Queen St / Division St	Signalized	WBL	126	15	25	9	15	B				
370	Queen St / Division St	Signalized	WBR	163	15	25	0	4	A				



Williamsville Operational Analysis

2036 No Mitigation - No Williamsville Growth - PM Peak

Measures of Effectiveness Details

ID	Intersection Name	Control Type	Number of Vehicles	50th %ile Queue (m)	95th %ile Queue (m)	Avg. Vehicle Delay (sec)	Avg. Stop Delay (sec)	LOS
10	Princess St / Concession St	Signalized	3,254	46.7	85.9	29.2	23.9	C
20	Princess St / Regent St	TWSC	1,502	0.1	76.1	2.9	1.2	-
30	Princess St / Drayton Av	TWSC	1,417	15.3	69.0	2.4	0.8	-
40	Princess St / Macdonnell Av	Signalized	1,409	79.4	157.1	19.5	12.8	B
50	Princess St / Smith St	TWSC	1,168	36.3	70.0	5.3	3.1	-
60	Princess St / Victoria St	Signalized	1,383	28.7	107.9	13.6	7.9	B
70	Princess St / Nelson St	TWSC	1,178	14.3	66.1	5.1	2.6	-
80	Princess St / Albert St	Signalized	1,170	58.2	99.9	21.4	15.4	C
90	Princess St / Frontenac St	TWSC	1,153	18.9	97.4	7.4	3.5	-
100	Princess St / Alfred St	Signalized	1,473	90.8	100.4	32.0	22.8	C
110	Princess St / Chatham St	TWSC	1,235	36.7	99.5	9.1	4.8	-
120	Princess St / University Av	Signalized	1,190	37.6	53.8	8.2	4.4	A
130	Princess St / Division St	Signalized	1,480	23.4	61.7	14.3	9.5	B
140	Concession St / Drayton Av	TWSC	1,009	4.9	158.2	13.0	6.6	-
150	Concession St / Leroy Grant Dr (S)	TWSC	1,069	63.9	73.8	20.5	14.0	-
155	Concession St / Leroy Grant Drive (N)	TWSC	1,174	2.3	7.9	4.1	1.9	-
160	Concession St / Macdonnell St	Signalized	1,981	72.9	77.1	14.8	9.5	B
170	Concession St / Connaught St	TWSC	1,737	32.9	104.3	7.2	4.1	-
180	Concession St / Victoria St	Signalized	1,930	87.8	97.4	17.0	11.3	B
190	Concession St / Nelson St	TWSC	1,699	0.0	89.3	4.4	2.5	-
200	Concession St / Kingscourt Av	TWSC	1,643	0.0	96.7	5.2	2.6	-
210	Concession St / Fergus St	TWSC	1,636	0.0	59.5	6.0	2.9	-
220	Concession St / Grey St	TWSC	1,636	27.5	52.5	7.6	5.0	-
230	Concession St / Alfred St	Signalized	1,762	55.0	88.7	16.9	11.2	B
240	Concession St / Lansdowne St	TWSC	1,159	0.0	32.8	1.6	0.6	-
250	Concession St / Division St	Signalized	2,185	67.1	128.2	28.6	21.6	C
260	Adelaide St / Division St	TWSC	1,126	0.0	51.7	2.7	1.2	-
270	Stanley St / Division St	TWSC	1,089	0.0	13.3	1.1	0.1	-
280	Pine St / Division St	Signalized	1,162	22.5	67.7	9.2	5.6	A
290	Quebec St / Division St	TWSC	991	0.0	39.3	1.6	0.5	-
300	York St / Division St	Signalized	1,067	22.7	44.9	7.0	4.4	A
310	Main St / Division St	TWSC	941	23.1	46.5	3.0	1.2	-
320	Hamilton St / Division St	TWSC	942	0.0	8.8	0.6	0.0	-
330	Raglan St / Division St	TWSC	938	0.0	0.1	0.1	0.0	-
340	Elm St / Division St	TWSC	974	0.0	15.3	0.1	0.0	-
350	Ellice St / Division St	TWSC	947	0.0	27.8	0.2	0.0	-
360	Colborne St / Division St	TWSC	929	0.0	17.7	0.7	0.5	-
370	Queen St / Division St	Signalized	1,447	39.9	99.6	18.4	10.6	B
<b>Total</b>			<b>52,185</b>	<b>1,009</b>	<b>2,644</b>	<b>362</b>	<b>230</b>	



Williamsville Operational Analysis  
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Measures of Effectiveness Details

Node	Location	Control	Mvmt.	Volume (All)	Queue (m)		Stop Delay (s)	Delay (s)	LOS	Critical Mvmt		Intersection	
					50th	95th				Delay	LOS	Delay	LOS
10	Princess St / Concession St	Signalized	NBL	309	45	135	34	41	D	45.0	D	29.2	C
10	Princess St / Concession St	Signalized	NBT	354	45	135	33	40	D				
10	Princess St / Concession St	Signalized	NBR	18	45	135	7	11	B				
10	Princess St / Concession St	Signalized	SBL	501	75	105	36	44	D				
10	Princess St / Concession St	Signalized	SBT	488	75	105	36	45	D				
10	Princess St / Concession St	Signalized	SBR	0	75	105	0	0	A				
10	Princess St / Concession St	Signalized	EBT	245	20	40	30	36	D				
10	Princess St / Concession St	Signalized	EBR	314	20	40	0	1	A				
10	Princess St / Concession St	Signalized	WBT	399	35	60	31	37	D				
10	Princess St / Concession St	Signalized	WBR	596	35	60	0	0	A				
10	Princess St / Concession St	Signalized	WBL	30	35	60	1	3	A				
20	Princess St / Regent St	TWSC	NBL	18	5	10	7	17	C	17.0	C	2.9	A
20	Princess St / Regent St	TWSC	NBR	16	5	10	4	12	B				
20	Princess St / Regent St	TWSC	EBT	717	0	80	1	3	A				
20	Princess St / Regent St	TWSC	EBR	70	0	80	1	2	A				
20	Princess St / Regent St	TWSC	WBL	34	0	75	5	8	A				
20	Princess St / Regent St	TWSC	WBT	647	0	75	1	2	A				
30	Princess St / Drayton Av	TWSC	SBL	4	5	45	22	39	E	39.0	E	2.4	A
30	Princess St / Drayton Av	TWSC	SBR	76	5	45	4	15	B				
30	Princess St / Drayton Av	TWSC	EBL	29	0	75	3	6	A				
30	Princess St / Drayton Av	TWSC	EBT	702	0	75	0	1	A				
30	Princess St / Drayton Av	TWSC	WBT	606	35	65	1	2	A				
30	Princess St / Drayton Av	TWSC	WBR	0	35	65	0	0	A				
40	Princess St / Macdonnell Av	Signalized	NBL	69	45	55	13	21	C	48.0	D	19.5	B
40	Princess St / Macdonnell Av	Signalized	NBT	24	45	55	11	20	B				
40	Princess St / Macdonnell Av	Signalized	NBR	68	45	55	9	18	B				
40	Princess St / Macdonnell Av	Signalized	SBL	2	15	40	3	13	B				
40	Princess St / Macdonnell Av	Signalized	SBT	41	15	40	14	20	B				
40	Princess St / Macdonnell Av	Signalized	SBR	44	15	40	4	12	B				
40	Princess St / Macdonnell Av	Signalized	EBL	37	115	260	22	30	C				
40	Princess St / Macdonnell Av	Signalized	EBT	633	115	260	15	23	C				
40	Princess St / Macdonnell Av	Signalized	EBR	27	115	260	12	20	B				
40	Princess St / Macdonnell Av	Signalized	WBL	8	50	60	38	48	D				
40	Princess St / Macdonnell Av	Signalized	WBT	456	50	60	10	14	B				
40	Princess St / Macdonnell Av	Signalized	WBR	0	50	60	0	0	A				
50	Princess St / Smith St	TWSC	SBL	0	40	40	0	0	A	23.0	C	5.3	A
50	Princess St / Smith St	TWSC	SBR	29	40	40	11	23	C				
50	Princess St / Smith St	TWSC	EBL	27	40	65	2	4	A				
50	Princess St / Smith St	TWSC	EBT	677	40	65	1	1	A				
50	Princess St / Smith St	TWSC	WBT	435	30	80	6	11	B				
50	Princess St / Smith St	TWSC	WBR	0	30	80	0	0	A				
60	Princess St / Victoria St	Signalized	NBL	14	15	35	19	27	C	27.0	C	13.6	B
60	Princess St / Victoria St	Signalized	NBT	80	15	35	18	25	C				
60	Princess St / Victoria St	Signalized	NBR	58	15	35	11	18	B				
60	Princess St / Victoria St	Signalized	SBL	22	5	15	18	24	C				
60	Princess St / Victoria St	Signalized	SBT	37	5	15	18	26	C				
60	Princess St / Victoria St	Signalized	SBR	14	5	15	2	5	A				
60	Princess St / Victoria St	Signalized	EBL	95	30	170	13	22	C				
60	Princess St / Victoria St	Signalized	EBT	579	30	170	5	11	B				
60	Princess St / Victoria St	Signalized	EBR	14	30	170	4	9	A				
60	Princess St / Victoria St	Signalized	WBL	14	35	55	18	23	C				
60	Princess St / Victoria St	Signalized	WBT	394	35	55	7	11	B				
60	Princess St / Victoria St	Signalized	WBR	62	35	55	5	9	A				
70	Princess St / Nelson St	TWSC	NBL	14	0	5	11	19	C	19.0	C	5.1	A
70	Princess St / Nelson St	TWSC	NBT	0	0	5	0	0	A				
70	Princess St / Nelson St	TWSC	NBR	0	0	5	0	0	A				
70	Princess St / Nelson St	TWSC	SBL	0	0	0	0	0	A				
70	Princess St / Nelson St	TWSC	SBT	0	0	0	0	0	A				
70	Princess St / Nelson St	TWSC	SBR	0	0	0	0	0	A				
70	Princess St / Nelson St	TWSC	EBL	97	25	115	6	12	B				
70	Princess St / Nelson St	TWSC	EBT	569	25	115	4	8	A				
70	Princess St / Nelson St	TWSC	EBR	10	25	115	1	2	A				
70	Princess St / Nelson St	TWSC	WBL	0	0	0	0	0	A				
70	Princess St / Nelson St	TWSC	WBT	475	0	0	0	0	A				
70	Princess St / Nelson St	TWSC	WBR	13	0	0	0	0	A				



Williamsville Operational Analysis  
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Measures of Effectiveness Details

Node	Location	Control	Mvmt.	Volume (All)	Queue (m)		Stop Delay (s)	Delay (s)	LOS	Critical Mvmt		Intersection	
					50th	95th				Delay	LOS	Delay	LOS
80	Princess St / Albert St	Signalized	NBL	50	10	20	13	18	B	34.0	C	21.4	C
80	Princess St / Albert St	Signalized	NBT	19	10	20	13	18	B				
80	Princess St / Albert St	Signalized	NBR	38	10	20	2	7	A				
80	Princess St / Albert St	Signalized	SBL	0	0	0	0	0	A				
80	Princess St / Albert St	Signalized	SBT	0	0	0	0	0	A				
80	Princess St / Albert St	Signalized	SBR	3	0	0	0	5	A				
80	Princess St / Albert St	Signalized	EBL	25	70	115	21	31	C				
80	Princess St / Albert St	Signalized	EBT	538	70	115	18	24	C				
80	Princess St / Albert St	Signalized	EBR	21	70	115	11	16	B				
80	Princess St / Albert St	Signalized	WBL	27	55	100	27	34	C				
80	Princess St / Albert St	Signalized	WBT	449	55	100	13	19	B				
80	Princess St / Albert St	Signalized	WBR	0	55	100	0	0	A				
90	Princess St / Frontenac St	TWSC	NBL	4	0	5	4	11	B	24.0	C	7.4	A
90	Princess St / Frontenac St	TWSC	NBT	8	0	5	12	24	C				
90	Princess St / Frontenac St	TWSC	NBR	0	0	5	0	0	A				
90	Princess St / Frontenac St	TWSC	SBL	0	0	0	0	0	A				
90	Princess St / Frontenac St	TWSC	SBT	0	0	0	0	0	A				
90	Princess St / Frontenac St	TWSC	SBR	0	0	0	0	0	A				
90	Princess St / Frontenac St	TWSC	EBL	61	35	155	8	16	C				
90	Princess St / Frontenac St	TWSC	EBT	563	35	155	6	12	B				
90	Princess St / Frontenac St	TWSC	EBR	0	35	155	0	0	A				
90	Princess St / Frontenac St	TWSC	WBL	0	0	30	0	0	A				
90	Princess St / Frontenac St	TWSC	WBT	510	0	30	0	1	A				
90	Princess St / Frontenac St	TWSC	WBR	7	0	30	0	0	A				
100	Princess St / Alfred St	Signalized	NBL	31	25	50	12	19	B	51.0	D	32.0	C
100	Princess St / Alfred St	Signalized	NBT	113	25	50	15	23	C				
100	Princess St / Alfred St	Signalized	NBR	99	25	50	10	18	B				
100	Princess St / Alfred St	Signalized	SBL	36	10	30	21	31	C				
100	Princess St / Alfred St	Signalized	SBT	50	10	30	14	21	C				
100	Princess St / Alfred St	Signalized	SBR	26	10	30	5	11	B				
100	Princess St / Alfred St	Signalized	EBL	2	135	145	34	51	D				
100	Princess St / Alfred St	Signalized	EBT	560	135	145	30	43	D				
100	Princess St / Alfred St	Signalized	EBR	15	135	145	28	40	D				
100	Princess St / Alfred St	Signalized	WBL	37	90	90	24	32	C				
100	Princess St / Alfred St	Signalized	WBT	461	90	90	22	28	C				
100	Princess St / Alfred St	Signalized	WBR	43	90	90	13	19	B				
110	Princess St / Chatham St	TWSC	SBL	0	0	0	0	0	A	33.0	D	9.1	A
110	Princess St / Chatham St	TWSC	SBR	0	0	0	0	0	A				
110	Princess St / Chatham St	TWSC	EBL	75	50	115	6	13	B				
110	Princess St / Chatham St	TWSC	EBT	614	50	115	5	11	B				
110	Princess St / Chatham St	TWSC	WBT	538	20	80	4	6	A				
110	Princess St / Chatham St	TWSC	WBR	8	20	80	25	33	D				
120	Princess St / University Av	Signalized	NBL	54	5	20	17	22	C	22.0	C	8.2	A
120	Princess St / University Av	Signalized	NBR	32	5	20	5	10	A				
120	Princess St / University Av	Signalized	EBT	544	65	70	5	10	A				
120	Princess St / University Av	Signalized	EBR	23	65	70	5	10	A				
120	Princess St / University Av	Signalized	WBL	16	10	40	2	6	A				
120	Princess St / University Av	Signalized	WBT	483	10	40	2	4	A				
120	Princess St / University Av	Signalized	NBT	0	5	20	0	0	A				
120	Princess St / University Av	Signalized	SBL	0	0	0	0	0	A				
120	Princess St / University Av	Signalized	SBT	0	0	0	0	0	A				
120	Princess St / University Av	Signalized	SBR	0	0	0	0	0	A				
120	Princess St / University Av	Signalized	EBL	38	65	70	8	16	B				
120	Princess St / University Av	Signalized	WBR	0	10	40	0	0	A				
130	Princess St / Division St	Signalized	NBL	55	20	40	12	22	C	27.0	C	14.3	B
130	Princess St / Division St	Signalized	NBT	155	20	40	12	18	B				
130	Princess St / Division St	Signalized	NBR	10	20	40	3	8	A				
130	Princess St / Division St	Signalized	SBL	138	15	70	6	10	A				
130	Princess St / Division St	Signalized	SBT	111	15	70	3	4	A				
130	Princess St / Division St	Signalized	SBR	441	15	70	0	1	A				
130	Princess St / Division St	Signalized	EBL	163	35	60	17	25	C				
130	Princess St / Division St	Signalized	EBT	384	35	60	19	27	C				
130	Princess St / Division St	Signalized	EBR	23	35	60	10	19	B				



Williamsville Operational Analysis

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Measures of Effectiveness Details

Node	Location	Control	Mvmt.	Volume (All)	Queue (m)		Stop Delay (s)	Delay (s)	LOS	Critical Mvmt		Intersection	
					50th	95th				Delay	LOS	Delay	LOS
140	Concession St / Drayton Av	TWSC	NBR	12	0	5	38	47	E	47.0	E	13.0	B
140	Concession St / Drayton Av	TWSC	EBT	952	5	160	6	12	B				
140	Concession St / Drayton Av	TWSC	EBR	45	5	160	12	24	C				
150	Concession St / Leroy Grant Dr (S)	TWSC	SBL	18	0	5	13	25	C	27.0	D	20.5	C
150	Concession St / Leroy Grant Dr (S)	TWSC	EBL	183	65	75	19	27	D				
150	Concession St / Leroy Grant Dr (S)	TWSC	EBT	868	65	75	13	19	C				
155	Concession St / Leroy Grant Drive (N)	TWSC	NBL	92	15	50	9	21	C	27.0	D	4.1	A
155	Concession St / Leroy Grant Drive (N)	TWSC	NBT	90	15	50	13	27	D				
155	Concession St / Leroy Grant Drive (N)	TWSC	SBT	18	0	5	10	20	C				
155	Concession St / Leroy Grant Drive (N)	TWSC	SBR	8	0	5	0	0	A				
155	Concession St / Leroy Grant Drive (N)	TWSC	WBT	926	0	0	0	0	A				
155	Concession St / Leroy Grant Drive (N)	TWSC	WBR	40	0	0	0	1	A				
160	Concession St / Macdonnell St	Signalized	NBL	31	10	35	19	26	C	50.0	D	14.8	B
160	Concession St / Macdonnell St	Signalized	NBT	26	10	35	19	27	C				
160	Concession St / Macdonnell St	Signalized	NBR	73	10	35	10	17	B				
160	Concession St / Macdonnell St	Signalized	SBR	67	5	15	4	7	A				
160	Concession St / Macdonnell St	Signalized	EBL	58	75	80	41	50	D				
160	Concession St / Macdonnell St	Signalized	EBT	762	75	80	8	13	B				
160	Concession St / Macdonnell St	Signalized	EBR	67	75	80	7	11	B				
160	Concession St / Macdonnell St	Signalized	WBL	26	85	85	35	46	D				
160	Concession St / Macdonnell St	Signalized	WBT	871	85	85	8	13	B				
160	Concession St / Macdonnell St	Signalized	WBR	0	85	85	0	0	A				
170	Concession St / Connaught St	TWSC	SBL	0	0	5	0	0	A	27.0	D	7.2	A
170	Concession St / Connaught St	TWSC	SBR	16	0	5	17	27	D				
170	Concession St / Connaught St	TWSC	EBL	0	5	95	0	0	A				
170	Concession St / Connaught St	TWSC	EBT	838	5	95	3	6	A				
170	Concession St / Connaught St	TWSC	WBT	883	60	115	5	8	A				
170	Concession St / Connaught St	TWSC	WBR	0	60	115	0	0	A				
180	Concession St / Victoria St	Signalized	NBL	55	25	80	40	52	D	52.0	D	17.0	B
180	Concession St / Victoria St	Signalized	NBT	33	25	80	30	38	D				
180	Concession St / Victoria St	Signalized	NBR	80	25	80	27	37	D				
180	Concession St / Victoria St	Signalized	SBL	12	5	15	27	36	D				
180	Concession St / Victoria St	Signalized	SBT	22	5	15	23	29	C				
180	Concession St / Victoria St	Signalized	SBR	36	5	15	3	13	B				
180	Concession St / Victoria St	Signalized	EBL	54	110	115	19	27	C				
180	Concession St / Victoria St	Signalized	EBT	770	110	115	9	14	B				
180	Concession St / Victoria St	Signalized	EBR	22	110	115	10	20	B				
180	Concession St / Victoria St	Signalized	WBL	44	85	90	23	30	C				
180	Concession St / Victoria St	Signalized	WBT	790	85	90	8	13	B				
180	Concession St / Victoria St	Signalized	WBR	12	85	90	0	1	A				
190	Concession St / Nelson St	TWSC	NBL	0	0	0	0	0	A	6.0	A	4.4	A
190	Concession St / Nelson St	TWSC	NBT	0	0	0	0	0	A				
190	Concession St / Nelson St	TWSC	NBR	0	0	0	0	0	A				
190	Concession St / Nelson St	TWSC	SBL	0	0	5	0	0	A				
190	Concession St / Nelson St	TWSC	SBT	0	0	5	0	0	A				
190	Concession St / Nelson St	TWSC	SBR	12	0	5	0	6	A				
190	Concession St / Nelson St	TWSC	EBL	0	0	85	0	0	A				
190	Concession St / Nelson St	TWSC	EBT	813	0	85	2	4	A				
190	Concession St / Nelson St	TWSC	EBR	46	0	85	2	2	A				
190	Concession St / Nelson St	TWSC	WBL	0	0	95	0	0	A				
190	Concession St / Nelson St	TWSC	WBT	828	0	95	3	5	A				
190	Concession St / Nelson St	TWSC	WBR	0	0	95	0	0	A				



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Measures of Effectiveness Details

Node	Location	Control	Mvmt.	Volume (All)	Queue (m)		Stop Delay (s)	Delay (s)	LOS	Critical Mvmt		Intersection	
					50th	95th				Delay	LOS	Delay	LOS
200	Concession St / Kingscourt Av	TWSC	SBL	0	0	15	0	0	A	20.0	C	5.2	A
200	Concession St / Kingscourt Av	TWSC	SBR	17	0	15	10	20	C				
200	Concession St / Kingscourt Av	TWSC	EBL	2	0	100	0	3	A				
200	Concession St / Kingscourt Av	TWSC	EBT	813	0	100	4	8	A				
200	Concession St / Kingscourt Av	TWSC	WBT	811	0	95	1	2	A				
200	Concession St / Kingscourt Av	TWSC	WBR	0	0	95	0	0	A				
210	Concession St / Fergus St	TWSC	SBL	12	0	5	59	70	F	70.0	F	6.0	A
210	Concession St / Fergus St	TWSC	SBR	0	0	5	0	0	A				
210	Concession St / Fergus St	TWSC	EBL	4	0	100	19	32	D				
210	Concession St / Fergus St	TWSC	EBT	806	0	100	5	10	A				
210	Concession St / Fergus St	TWSC	WBT	810	0	20	0	1	A				
210	Concession St / Fergus St	TWSC	WBR	4	0	20	0	0	A				
220	Concession St / Grey St	TWSC	SBL	0	0	5	0	0	A	19.0	C	7.6	A
220	Concession St / Grey St	TWSC	SBR	16	0	5	4	12	B				
220	Concession St / Grey St	TWSC	EBL	4	55	105	14	19	C				
220	Concession St / Grey St	TWSC	EBT	813	55	105	10	15	B				
220	Concession St / Grey St	TWSC	WBT	799	0	0	0	0	A				
220	Concession St / Grey St	TWSC	WBR	4	0	0	0	0	A				
230	Concession St / Alfred St	Signalized	NBL	191	30	95	20	30	C	31.0	C	16.9	B
230	Concession St / Alfred St	Signalized	NBT	35	30	95	22	31	C				
230	Concession St / Alfred St	Signalized	NBR	34	30	95	16	23	C				
230	Concession St / Alfred St	Signalized	SBL	0	5	15	0	0	A				
230	Concession St / Alfred St	Signalized	SBT	34	5	15	18	23	C				
230	Concession St / Alfred St	Signalized	SBR	24	5	15	4	8	A				
230	Concession St / Alfred St	Signalized	EBL	29	55	60	18	25	C				
230	Concession St / Alfred St	Signalized	EBT	541	55	60	10	14	B				
230	Concession St / Alfred St	Signalized	EBR	245	55	60	2	4	A				
230	Concession St / Alfred St	Signalized	WBL	41	70	130	12	20	B				
230	Concession St / Alfred St	Signalized	WBT	588	70	130	12	19	B				
230	Concession St / Alfred St	Signalized	WBR	0	70	130	0	0	A				
240	Concession St / Lansdowne St	TWSC	NBL	0	0	0	0	0	A	6.0	A	1.6	A
240	Concession St / Lansdowne St	TWSC	NBR	0	0	0	0	0	A				
240	Concession St / Lansdowne St	TWSC	EBT	526	0	0	0	1	A				
240	Concession St / Lansdowne St	TWSC	EBR	0	0	0	0	0	A				
240	Concession St / Lansdowne St	TWSC	WBL	26	0	60	3	6	A				
240	Concession St / Lansdowne St	TWSC	WBT	607	0	60	1	2	A				
250	Concession St / Division St	Signalized	NBL	57	80	110	27	39	D	65.0	E	28.6	C
250	Concession St / Division St	Signalized	NBT	562	80	110	19	25	C				
250	Concession St / Division St	Signalized	NBR	0	80	110	0	0	A				
250	Concession St / Division St	Signalized	SBL	28	65	140	31	42	D				
250	Concession St / Division St	Signalized	SBT	421	65	140	17	23	C				
250	Concession St / Division St	Signalized	SBR	177	65	140	4	9	A				
250	Concession St / Division St	Signalized	EBL	221	35	105	21	29	C				
250	Concession St / Division St	Signalized	EBT	228	35	105	13	18	B				
250	Concession St / Division St	Signalized	EBR	64	35	105	5	8	A				
250	Concession St / Division St	Signalized	WBL	12	90	165	54	65	E				
250	Concession St / Division St	Signalized	WBT	381	90	165	43	53	D				
250	Concession St / Division St	Signalized	WBR	34	90	165	39	50	D				



Williamsville Operational Analysis

2036 No Mitigation - No Williamsville Growth - PM Peak

Measures of Effectiveness Details



Node	Location	Control	Mvmt.	Volume (All)	Queue (m)		Stop Delay (s)	Delay (s)	LOS	Critical Mvmt		Intersection	
					50th	95th				Delay	LOS	Delay	LOS
260	Adelaide St / Division St	TWSC	NBL	0	0	70	0	0	A	16.0	C	2.7	A
260	Adelaide St / Division St	TWSC	NBT	617	0	70	2	4	A				
260	Adelaide St / Division St	TWSC	NBR	0	0	70	0	0	A				
260	Adelaide St / Division St	TWSC	SBL	8	0	30	2	4	A				
260	Adelaide St / Division St	TWSC	SBT	450	0	30	0	1	A				
260	Adelaide St / Division St	TWSC	SBR	40	0	30	0	0	A				
260	Adelaide St / Division St	TWSC	EBL	1	0	0	0	0	A				
260	Adelaide St / Division St	TWSC	EBT	0	0	0	0	0	A				
260	Adelaide St / Division St	TWSC	EBR	0	0	0	0	0	A				
260	Adelaide St / Division St	TWSC	WBL	7	0	5	5	14	B				
260	Adelaide St / Division St	TWSC	WBT	3	0	5	6	16	C				
260	Adelaide St / Division St	TWSC	WBR	0	0	5	0	0	A				
270	Stanley St / Division St	TWSC	NBL	11	0	5	3	5	A	21.0	C	1.1	A
270	Stanley St / Division St	TWSC	NBT	606	0	5	0	0	A				
270	Stanley St / Division St	TWSC	SBT	383	0	25	0	2	A				
270	Stanley St / Division St	TWSC	SBR	71	0	25	0	1	A				
270	Stanley St / Division St	TWSC	EBL	12	0	5	6	21	C				
270	Stanley St / Division St	TWSC	EBR	6	0	5	2	10	A				
280	Pine St / Division St	Signalized	NBL	39	25	80	8	14	B	28.0	C	9.2	A
280	Pine St / Division St	Signalized	NBT	542	25	80	4	7	A				
280	Pine St / Division St	Signalized	NBR	14	25	80	3	5	A				
280	Pine St / Division St	Signalized	SBL	36	25	70	9	15	B				
280	Pine St / Division St	Signalized	SBT	353	25	70	5	8	A				
280	Pine St / Division St	Signalized	SBR	6	25	70	2	6	A				
280	Pine St / Division St	Signalized	EBL	0	5	20	0	0	A				
280	Pine St / Division St	Signalized	EBT	26	5	20	22	28	C				
280	Pine St / Division St	Signalized	EBR	34	5	20	4	9	A				
280	Pine St / Division St	Signalized	WBL	2	10	20	14	18	B				
280	Pine St / Division St	Signalized	WBT	33	10	20	21	27	C				
280	Pine St / Division St	Signalized	WBR	77	10	20	6	12	B				
290	Quebec St / Division St	TWSC	NBT	593	0	30	0	1	A	13.0	B	1.6	A
290	Quebec St / Division St	TWSC	NBR	0	0	30	0	0	A				
290	Quebec St / Division St	TWSC	SBL	9	0	55	3	7	A				
290	Quebec St / Division St	TWSC	SBT	375	0	55	1	2	A				
290	Quebec St / Division St	TWSC	WBL	14	0	5	5	13	B				
290	Quebec St / Division St	TWSC	WBR	0	0	5	0	0	A				
300	York St / Division St	Signalized	NBL	6	35	35	5	7	A	32.0	C	7.0	A
300	York St / Division St	Signalized	NBT	532	35	35	2	4	A				
300	York St / Division St	Signalized	NBR	12	35	35	0	0	A				
300	York St / Division St	Signalized	SBL	38	10	65	11	17	B				
300	York St / Division St	Signalized	SBT	352	10	65	3	5	A				
300	York St / Division St	Signalized	SBR	0	10	65	0	0	A				
300	York St / Division St	Signalized	EBL	0	0	10	0	0	A				
300	York St / Division St	Signalized	EBT	23	0	10	24	28	C				
300	York St / Division St	Signalized	EBR	0	0	10	0	0	A				
300	York St / Division St	Signalized	WBL	33	10	30	25	32	C				
300	York St / Division St	Signalized	WBT	10	10	30	21	28	C				
300	York St / Division St	Signalized	WBR	61	10	30	8	15	B				
310	Main St / Division St	TWSC	NBT	550	15	55	2	5	A	12.0	B	3.0	A
310	Main St / Division St	TWSC	NBR	0	15	55	0	0	A				
310	Main St / Division St	TWSC	SBL	6	35	35	2	5	A				
310	Main St / Division St	TWSC	SBT	379	35	35	0	0	A				
310	Main St / Division St	TWSC	WBL	6	0	5	3	12	B				
310	Main St / Division St	TWSC	WBR	0	0	5	0	0	A				

Williamsville Operational Analysis

2036 No Mitigation - No Williamsville Growth - PM Peak

Measures of Effectiveness Details



Node	Location	Control	Mvmt.	Volume (All)	Queue (m)		Stop Delay (s)	Delay (s)	LOS	Critical Mvmt		Intersection	
					50th	95th				Delay	LOS	Delay	LOS
320	Hamilton St / Division St	TWSC	NBL	0	0	15	0	0	A	6.0	A	0.6	A
320	Hamilton St / Division St	TWSC	NBT	549	0	15	0	1	A				
320	Hamilton St / Division St	TWSC	SBT	362	0	0	0	0	A				
320	Hamilton St / Division St	TWSC	SBR	24	0	0	0	0	A				
320	Hamilton St / Division St	TWSC	EBL	0	0	5	0	0	A				
320	Hamilton St / Division St	TWSC	EBR	7	0	5	0	6	A				
330	Raglan St / Division St	TWSC	NBT	549	0	0	0	0	A	12.0	B	0.1	A
330	Raglan St / Division St	TWSC	NBR	10	0	0	0	0	A				
330	Raglan St / Division St	TWSC	SBL	0	0	0	0	0	A				
330	Raglan St / Division St	TWSC	SBT	369	0	0	0	0	A				
330	Raglan St / Division St	TWSC	WBL	10	0	5	3	12	B				
330	Raglan St / Division St	TWSC	WBR	0	0	5	0	0	A				
340	Elm St / Division St	TWSC	NBL	36	0	25	1	3	A	3.0	A	0.1	A
340	Elm St / Division St	TWSC	NBT	560	0	25	0	0	A				
340	Elm St / Division St	TWSC	SBT	348	0	0	0	0	A				
340	Elm St / Division St	TWSC	SBR	30	0	0	0	1	A				
340	Elm St / Division St	TWSC	EBL	0	0	0	0	0	A				
340	Elm St / Division St	TWSC	EBR	0	0	0	0	0	A				
350	Ellice St / Division St	TWSC	NBT	582	0	45	0	0	A	9.0	A	0.2	A
350	Ellice St / Division St	TWSC	NBR	2	0	45	0	0	A				
350	Ellice St / Division St	TWSC	SBL	6	0	0	2	4	A				
350	Ellice St / Division St	TWSC	SBT	343	0	0	0	0	A				
350	Ellice St / Division St	TWSC	WBL	0	0	5	0	0	A				
350	Ellice St / Division St	TWSC	WBR	14	0	5	2	9	A				
360	Colborne St / Division St	TWSC	NBL	0	0	20	0	0	A	12.0	B	0.7	A
360	Colborne St / Division St	TWSC	NBT	556	0	20	0	0	A				
360	Colborne St / Division St	TWSC	NBR	0	0	20	0	0	A				
360	Colborne St / Division St	TWSC	SBL	6	0	15	0	1	A				
360	Colborne St / Division St	TWSC	SBT	337	0	15	1	1	A				
360	Colborne St / Division St	TWSC	SBR	0	0	15	0	0	A				
360	Colborne St / Division St	TWSC	EBL	14	0	5	4	12	B				
360	Colborne St / Division St	TWSC	EBT	2	0	5	0	9	A				
360	Colborne St / Division St	TWSC	EBR	0	0	5	0	0	A				
360	Colborne St / Division St	TWSC	WBL	0	0	5	0	0	A				
360	Colborne St / Division St	TWSC	WBT	0	0	5	0	0	A				
360	Colborne St / Division St	TWSC	WBR	14	0	5	2	9	A				
370	Queen St / Division St	Signalized	NBT	209	20	70	8	11	B	30.0	C	18.4	B
370	Queen St / Division St	Signalized	NBR	111	20	70	1	9	A				
370	Queen St / Division St	Signalized	SBL	92	35	80	20	30	C				
370	Queen St / Division St	Signalized	SBT	247	35	80	14	20	B				
370	Queen St / Division St	Signalized	WBL	442	50	120	18	30	C				
370	Queen St / Division St	Signalized	WBR	346	50	120	1	7	A				



Williamsville Operational Analysis

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Measures of Effectiveness Details

ID	Intersection Name	Control Type	Number of Vehicles	50th %'ile Queue (m)	95th %'ile Queue (m)	Avg. Vehicle Delay (sec)	Avg. Stop Delay (sec)	LOS
10	Princess St / Concession St	Signalized	2,644	40.4	61.9	26.2	21.1	C
20	Princess St / Regent St	TWSC	1,035	0.2	52.6	2.4	0.2	-
30	Princess St / Drayton Av	TWSC	986	0.0	53.5	1.9	0.1	-
40	Princess St / Macdonnell Av	Signalized	926	51.1	113.6	16.1	10.3	B
50	Princess St / Smith St	TWSC	770	28.6	32.9	0.8	0.3	-
60	Princess St / Victoria St	Signalized	993	11.1	59.6	7.5	3.9	A
70	Princess St / Nelson St	TWSC	902	0.1	7.6	1.8	0.3	-
80	Princess St / Albert St	Signalized	930	22.6	57.6	12.3	8.7	B
90	Princess St / Frontenac St	TWSC	832	0.0	27.3	0.8	0.0	-
100	Princess St / Alfred St	Signalized	1,172	43.9	65.8	23.7	17.2	C
110	Princess St / Chatham St	TWSC	828	0.0	23.2	1.4	0.0	-
120	Princess St / University Av	Signalized	804	15.2	53.2	5.4	2.7	A
130	Princess St / Division St	Signalized	1,001	17.6	54.0	16.6	11.5	B
140	Concession St / Drayton Av	TWSC	941	0.2	131.0	11.3	7.0	-
150	Concession St / Leroy Grant Dr (S)	TWSC	913	49.9	74.9	7.8	3.9	-
155	Concession St / Leroy Grant Drive (N)	TWSC	768	0.3	0.8	0.6	0.1	-
160	Concession St / Macdonnell St	Signalized	1,555	49.7	61.5	9.9	6.5	A
170	Concession St / Connaught St	TWSC	1,298	0.0	46.9	0.8	0.1	-
180	Concession St / Victoria St	Signalized	1,384	31.1	79.4	10.8	7.4	B
190	Concession St / Nelson St	TWSC	1,235	0.1	52.2	1.8	0.6	-
200	Concession St / Kingscourt Av	TWSC	1,224	0.2	37.7	1.8	0.4	-
210	Concession St / Fergus St	TWSC	1,257	0.2	43.0	3.0	1.1	-
220	Concession St / Grey St	TWSC	1,288	16.4	57.3	6.9	3.9	-
230	Concession St / Alfred St	Signalized	1,362	41.4	61.5	12.0	7.7	B
240	Concession St / Lansdowne St	TWSC	997	0.0	0.0	0.6	0.0	-
250	Concession St / Division St	Signalized	1,661	39.8	91.6	20.9	15.0	C
260	Adelaide St / Division St	TWSC	658	0.0	25.8	0.2	0.1	-
270	Stanley St / Division St	TWSC	678	0.3	14.2	1.8	0.8	-
280	Pine St / Division St	Signalized	752	13.2	49.9	8.8	5.1	A
290	Quebec St / Division St	TWSC	650	0.0	31.8	0.9	0.1	-
300	York St / Division St	Signalized	741	12.0	32.7	7.5	5.4	A
310	Main St / Division St	TWSC	610	23.2	26.6	0.8	0.3	-
320	Hamilton St / Division St	TWSC	591	0.0	0.1	0.1	0.0	-
330	Raglan St / Division St	TWSC	585	0.0	0.1	0.1	0.0	-
340	Elm St / Division St	TWSC	568	0.0	0.0	0.1	0.0	-
350	Ellice St / Division St	TWSC	575	0.0	0.1	0.2	0.0	-
360	Colborne St / Division St	TWSC	576	0.0	16.1	1.8	0.7	-
370	Queen St / Division St	Signalized	837	27.7	48.6	14.7	8.7	B
<b>Total</b>			<b>37,527</b>	<b>536</b>	<b>1,647</b>	<b>242</b>	<b>151</b>	



Williamsville Operational Analysis

2036 No Mitigation - Approved Growth, 22% Auto M.S. - AM Peak

Measures of Effectiveness Details

Node	Location	Control	Mvmt.	Volume (All)	Queue (m)		Stop Delay (s)	Delay (s)	LOS	Critical Mvmt		Intersection	
					50th	95th				Delay	LOS	Delay	LOS
10	Princess St / Concession St	Signalized	NBL	142	25	35	39	46	D	46.0	D	26.2	C
10	Princess St / Concession St	Signalized	NBT	91	25	35	35	42	D				
10	Princess St / Concession St	Signalized	NBR	32	25	35	0	1	A				
10	Princess St / Concession St	Signalized	SBL	505	65	95	29	36	D				
10	Princess St / Concession St	Signalized	SBT	497	65	95	29	37	D				
10	Princess St / Concession St	Signalized	SBR	30	65	95	14	18	B				
10	Princess St / Concession St	Signalized	EBT	398	30	50	28	33	C				
10	Princess St / Concession St	Signalized	EBR	224	30	50	0	2	A				
10	Princess St / Concession St	Signalized	WBT	243	20	35	26	32	C				
10	Princess St / Concession St	Signalized	WBR	394	20	35	0	0	A				
10	Princess St / Concession St	Signalized	WBL	88	20	35	2	5	A				
20	Princess St / Regent St	TWSC	NBL	0	5	10	0	0	A	11.0	B	2.4	A
20	Princess St / Regent St	TWSC	NBR	33	5	10	4	11	B				
20	Princess St / Regent St	TWSC	EBT	669	0	75	0	3	A				
20	Princess St / Regent St	TWSC	EBR	52	0	75	0	1	A				
20	Princess St / Regent St	TWSC	WBL	7	0	0	7	9	A				
20	Princess St / Regent St	TWSC	WBT	274	0	0	0	0	A				
30	Princess St / Drayton Av	TWSC	SBL	0	0	0	0	0	A	3.0	A	1.9	A
30	Princess St / Drayton Av	TWSC	SBR	0	0	0	0	0	A				
30	Princess St / Drayton Av	TWSC	EBL	137	0	75	1	3	A				
30	Princess St / Drayton Av	TWSC	EBT	567	0	75	0	2	A				
30	Princess St / Drayton Av	TWSC	WBT	280	0	0	0	1	A				
30	Princess St / Drayton Av	TWSC	WBR	2	0	0	0	0	A				
40	Princess St / Macdonnell Av	Signalized	NBL	43	5	25	13	19	B	28.0	C	16.1	B
40	Princess St / Macdonnell Av	Signalized	NBT	17	5	25	12	17	B				
40	Princess St / Macdonnell Av	Signalized	NBR	26	5	25	6	12	B				
40	Princess St / Macdonnell Av	Signalized	SBL	9	40	40	14	18	B				
40	Princess St / Macdonnell Av	Signalized	SBT	14	40	40	12	16	B				
40	Princess St / Macdonnell Av	Signalized	SBR	26	40	40	2	10	A				
40	Princess St / Macdonnell Av	Signalized	EBL	33	70	160	14	20	B				
40	Princess St / Macdonnell Av	Signalized	EBT	499	70	160	11	17	B				
40	Princess St / Macdonnell Av	Signalized	EBR	27	70	160	8	13	B				
40	Princess St / Macdonnell Av	Signalized	WBL	7	25	50	19	28	C				
40	Princess St / Macdonnell Av	Signalized	WBT	215	25	50	9	14	B				
40	Princess St / Macdonnell Av	Signalized	WBR	10	25	50	6	11	B				
50	Princess St / Smith St	TWSC	SBL	2	40	40	0	10	A	12.0	B	0.8	A
50	Princess St / Smith St	TWSC	SBR	12	40	40	1	12	B				
50	Princess St / Smith St	TWSC	EBL	4	40	40	0	2	A				
50	Princess St / Smith St	TWSC	EBT	532	40	40	0	0	A				
50	Princess St / Smith St	TWSC	WBT	220	0	15	1	2	A				
50	Princess St / Smith St	TWSC	WBR	0	0	15	0	0	A				
60	Princess St / Victoria St	Signalized	NBL	24	10	35	16	23	C	26.0	C	7.5	A
60	Princess St / Victoria St	Signalized	NBT	29	10	35	18	26	C				
60	Princess St / Victoria St	Signalized	NBR	44	10	35	6	11	B				
60	Princess St / Victoria St	Signalized	SBL	7	5	20	18	23	C				
60	Princess St / Victoria St	Signalized	SBT	61	5	20	15	21	C				
60	Princess St / Victoria St	Signalized	SBR	2	5	20	0	0	A				
60	Princess St / Victoria St	Signalized	EBL	10	10	80	10	15	B				
60	Princess St / Victoria St	Signalized	EBT	516	10	80	1	4	A				
60	Princess St / Victoria St	Signalized	EBR	8	10	80	1	4	A				
60	Princess St / Victoria St	Signalized	WBL	22	15	40	13	17	B				
60	Princess St / Victoria St	Signalized	WBT	192	15	40	3	6	A				
60	Princess St / Victoria St	Signalized	WBR	78	15	40	2	6	A				
70	Princess St / Nelson St	TWSC	NBL	5	5	45	6	17	C	18.0	C	1.8	A
70	Princess St / Nelson St	TWSC	NBT	8	5	45	6	18	C				
70	Princess St / Nelson St	TWSC	NBR	7	5	45	5	14	B				
70	Princess St / Nelson St	TWSC	SBL	8	0	5	5	18	C				
70	Princess St / Nelson St	TWSC	SBT	0	0	5	0	0	A				
70	Princess St / Nelson St	TWSC	SBR	8	0	5	1	13	B				
70	Princess St / Nelson St	TWSC	EBL	31	0	0	1	3	A				
70	Princess St / Nelson St	TWSC	EBT	533	0	0	0	1	A				
70	Princess St / Nelson St	TWSC	EBR	7	0	0	0	1	A				
70	Princess St / Nelson St	TWSC	WBL	14	0	20	4	7	A				
70	Princess St / Nelson St	TWSC	WBT	281	0	20	0	1	A				
70	Princess St / Nelson St	TWSC	WBR	0	0	20	0	0	A				

Williamsville Operational Analysis

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Measures of Effectiveness Details



Node	Location	Control	Mvmt.	Volume (All)	Queue (m)		Stop Delay (s)	Delay (s)	LOS	Critical Mvmt		Intersection	
					50th	95th				Delay	LOS	Delay	LOS
80	Princess St / Albert St	Signalized	NBL	13	5	15	13	18	B	29.0	C	12.3	B
80	Princess St / Albert St	Signalized	NBT	17	5	15	12	16	B				
80	Princess St / Albert St	Signalized	NBR	27	5	15	3	8	A				
80	Princess St / Albert St	Signalized	SBL	3	5	15	17	29	C				
80	Princess St / Albert St	Signalized	SBT	31	5	15	12	15	B				
80	Princess St / Albert St	Signalized	SBR	29	5	15	3	9	A				
80	Princess St / Albert St	Signalized	EBL	2	30	80	18	21	C				
80	Princess St / Albert St	Signalized	EBT	533	30	80	11	14	B				
80	Princess St / Albert St	Signalized	EBR	15	30	80	8	11	B				
80	Princess St / Albert St	Signalized	WBL	8	15	30	18	25	C				
80	Princess St / Albert St	Signalized	WBT	251	15	30	4	8	A				
80	Princess St / Albert St	Signalized	WBR	1	15	30	0	0	A				
90	Princess St / Frontenac St	TWSC	NBL	2	0	5	2	11	B	11.0	B	0.8	A
90	Princess St / Frontenac St	TWSC	NBT	0	0	5	0	0	A				
90	Princess St / Frontenac St	TWSC	NBR	0	0	5	0	0	A				
90	Princess St / Frontenac St	TWSC	SBL	0	0	5	0	0	A				
90	Princess St / Frontenac St	TWSC	SBT	0	0	5	0	0	A				
90	Princess St / Frontenac St	TWSC	SBR	8	0	5	0	7	A				
90	Princess St / Frontenac St	TWSC	EBL	29	0	40	0	2	A				
90	Princess St / Frontenac St	TWSC	EBT	529	0	40	0	1	A				
90	Princess St / Frontenac St	TWSC	EBR	8	0	40	0	2	A				
90	Princess St / Frontenac St	TWSC	WBL	4	0	0	0	1	A				
90	Princess St / Frontenac St	TWSC	WBT	251	0	0	0	0	A				
90	Princess St / Frontenac St	TWSC	WBR	1	0	0	0	0	A				
100	Princess St / Alfred St	Signalized	NBL	27	20	40	14	21	C	36.0	D	23.7	C
100	Princess St / Alfred St	Signalized	NBT	109	20	40	13	19	B				
100	Princess St / Alfred St	Signalized	NBR	75	20	40	6	11	B				
100	Princess St / Alfred St	Signalized	SBL	26	20	50	15	24	C				
100	Princess St / Alfred St	Signalized	SBT	133	20	50	13	20	B				
100	Princess St / Alfred St	Signalized	SBR	60	20	50	6	11	B				
100	Princess St / Alfred St	Signalized	EBL	12	70	90	29	36	D				
100	Princess St / Alfred St	Signalized	EBT	497	70	90	22	29	C				
100	Princess St / Alfred St	Signalized	EBR	7	70	90	18	25	C				
100	Princess St / Alfred St	Signalized	WBL	8	30	50	21	29	C				
100	Princess St / Alfred St	Signalized	WBT	192	30	50	20	26	C				
100	Princess St / Alfred St	Signalized	WBR	26	30	50	2	6	A				
110	Princess St / Chatham St	TWSC	SBL	0	0	0	0	0	A	2.0	A	1.4	A
110	Princess St / Chatham St	TWSC	SBR	1	0	0	0	0	A				
110	Princess St / Chatham St	TWSC	EBL	15	0	15	0	2	A				
110	Princess St / Chatham St	TWSC	EBT	584	0	15	0	2	A				
110	Princess St / Chatham St	TWSC	WBT	224	0	45	0	0	A				
110	Princess St / Chatham St	TWSC	WBR	4	0	45	0	0	A				
120	Princess St / University Av	Signalized	NBL	33	5	10	18	23	C	24.0	C	5.4	A
120	Princess St / University Av	Signalized	NBR	21	5	10	3	8	A				
120	Princess St / University Av	Signalized	EBT	484	20	70	2	5	A				
120	Princess St / University Av	Signalized	EBR	61	20	70	1	4	A				
120	Princess St / University Av	Signalized	WBL	8	5	20	16	24	C				
120	Princess St / University Av	Signalized	WBT	197	5	20	2	3	A				
130	Princess St / Division St	Signalized	NBL	23	5	20	15	26	C	28.0	C	16.6	B
130	Princess St / Division St	Signalized	NBT	52	5	20	11	17	B				
130	Princess St / Division St	Signalized	NBR	1	5	20	0	0	A				
130	Princess St / Division St	Signalized	SBL	142	5	65	3	6	A				
130	Princess St / Division St	Signalized	SBT	97	5	65	3	4	A				
130	Princess St / Division St	Signalized	SBR	182	5	65	0	0	A				
130	Princess St / Division St	Signalized	EBL	127	30	50	20	28	C				
130	Princess St / Division St	Signalized	EBT	359	30	50	20	28	C				
130	Princess St / Division St	Signalized	EBR	18	30	50	7	15	B				

Williamsville Operational Analysis

2036 No Mitigation - Approved Growth, 22% Auto M.S. - AM Peak

Measures of Effectiveness Details



Node	Location	Control	Mvmt.	Volume (All)	Queue (m)		Stop Delay (s)	Delay (s)	LOS	Critical Mvmt		Intersection	
					50th	95th				Delay	LOS	Delay	LOS
140	Concession St / Drayton Av	TWSC	NBR	36	5	30	83	95	F	95.0	F	11.3	B
140	Concession St / Drayton Av	TWSC	EBT	905	0	135	4	8	A				
140	Concession St / Drayton Av	TWSC	EBR	0	0	135	0	0	A				
150	Concession St / Leroy Grant Dr (S)	TWSC	SBL	1	0	0	25	36	E	36.0	E	7.8	A
150	Concession St / Leroy Grant Dr (S)	TWSC	EBL	42	50	75	1	4	A				
150	Concession St / Leroy Grant Dr (S)	TWSC	EBT	870	50	75	4	8	A				
155	Concession St / Leroy Grant Drive (N)	TWSC	NBL	31	5	15	2	10	A	11.0	B	0.6	A
155	Concession St / Leroy Grant Drive (N)	TWSC	NBT	12	5	15	2	11	B				
155	Concession St / Leroy Grant Drive (N)	TWSC	SBT	1	0	0	0	8	A				
155	Concession St / Leroy Grant Drive (N)	TWSC	SBR	76	0	0	0	0	A				
155	Concession St / Leroy Grant Drive (N)	TWSC	WBT	622	0	0	0	0	A				
155	Concession St / Leroy Grant Drive (N)	TWSC	WBR	26	0	0	0	1	A				
160	Concession St / Macdonnell St	Signalized	NBL	60	5	20	21	27	C	27.0	C	9.9	A
160	Concession St / Macdonnell St	Signalized	NBT	0	5	20	0	0	A				
160	Concession St / Macdonnell St	Signalized	NBR	4	5	20	13	22	C				
160	Concession St / Macdonnell St	Signalized	SBR	45	0	5	1	3	A				
160	Concession St / Macdonnell St	Signalized	EBL	36	75	75	10	17	B				
160	Concession St / Macdonnell St	Signalized	EBT	714	75	75	7	11	B				
160	Concession St / Macdonnell St	Signalized	EBR	123	75	75	5	9	A				
160	Concession St / Macdonnell St	Signalized	WBL	28	20	50	19	26	C				
160	Concession St / Macdonnell St	Signalized	WBT	545	20	50	4	6	A				
160	Concession St / Macdonnell St	Signalized	WBR	0	20	50	0	0	A				
170	Concession St / Connaught St	TWSC	SBL	8	0	5	8	16	C	16.0	C	0.8	A
170	Concession St / Connaught St	TWSC	SBR	8	0	5	3	10	A				
170	Concession St / Connaught St	TWSC	EBL	17	0	85	3	6	A				
170	Concession St / Connaught St	TWSC	EBT	698	0	85	0	1	A				
170	Concession St / Connaught St	TWSC	WBT	563	0	0	0	0	A				
170	Concession St / Connaught St	TWSC	WBR	4	0	0	0	0	A				
180	Concession St / Victoria St	Signalized	NBL	40	5	20	20	26	C	35.0	C	10.8	B
180	Concession St / Victoria St	Signalized	NBT	14	5	20	22	27	C				
180	Concession St / Victoria St	Signalized	NBR	19	5	20	10	16	B				
180	Concession St / Victoria St	Signalized	SBL	7	5	15	30	35	C				
180	Concession St / Victoria St	Signalized	SBT	30	5	15	25	30	C				
180	Concession St / Victoria St	Signalized	SBR	45	5	15	2	9	A				
180	Concession St / Victoria St	Signalized	EBL	20	30	85	7	10	A				
180	Concession St / Victoria St	Signalized	EBT	663	30	85	6	8	A				
180	Concession St / Victoria St	Signalized	EBR	8	30	85	7	13	B				
180	Concession St / Victoria St	Signalized	WBL	48	40	90	18	25	C				
180	Concession St / Victoria St	Signalized	WBT	486	40	90	6	10	A				
180	Concession St / Victoria St	Signalized	WBR	4	40	90	0	1	A				
190	Concession St / Nelson St	TWSC	NBL	7	0	5	8	17	C	17.0	C	1.8	A
190	Concession St / Nelson St	TWSC	NBT	0	0	5	0	0	A				
190	Concession St / Nelson St	TWSC	NBR	3	0	5	1	7	A				
190	Concession St / Nelson St	TWSC	SBL	0	5	5	0	0	A				
190	Concession St / Nelson St	TWSC	SBT	0	5	5	0	0	A				
190	Concession St / Nelson St	TWSC	SBR	25	5	5	0	6	A				
190	Concession St / Nelson St	TWSC	EBL	39	0	60	2	5	A				
190	Concession St / Nelson St	TWSC	EBT	647	0	60	0	1	A				
190	Concession St / Nelson St	TWSC	EBR	0	0	60	0	0	A				
190	Concession St / Nelson St	TWSC	WBL	10	0	45	5	8	A				
190	Concession St / Nelson St	TWSC	WBT	504	0	45	1	2	A				
190	Concession St / Nelson St	TWSC	WBR	0	0	45	0	0	A				

Williamsville Operational Analysis

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Measures of Effectiveness Details



Node	Location	Control	Mvmt.	Volume (All)	Queue (m)		Stop Delay (s)	Delay (s)	LOS	Critical Mvmt		Intersection	
					50th	95th				Delay	LOS	Delay	LOS
200	Concession St / Kingscourt Av	TWSC	SBL	43	5	15	9	18	C	21.0	C	1.8	A
200	Concession St / Kingscourt Av	TWSC	SBR	4	5	15	5	21	C				
200	Concession St / Kingscourt Av	TWSC	EBL	24	0	70	2	5	A				
200	Concession St / Kingscourt Av	TWSC	EBT	625	0	70	0	2	A				
200	Concession St / Kingscourt Av	TWSC	WBT	508	0	0	0	0	A				
200	Concession St / Kingscourt Av	TWSC	WBR	20	0	0	0	0	A				
210	Concession St / Fergus St	TWSC	SBL	43	5	15	15	25	C	25.0	C	3.0	A
210	Concession St / Fergus St	TWSC	SBR	1	5	15	0	6	A				
210	Concession St / Fergus St	TWSC	EBL	21	0	80	2	5	A				
210	Concession St / Fergus St	TWSC	EBT	647	0	80	1	4	A				
210	Concession St / Fergus St	TWSC	WBT	525	0	0	0	0	A				
210	Concession St / Fergus St	TWSC	WBR	20	0	0	0	0	A				
220	Concession St / Grey St	TWSC	SBL	29	5	20	44	54	F	54.0	F	6.9	A
220	Concession St / Grey St	TWSC	SBR	14	5	20	16	24	C				
220	Concession St / Grey St	TWSC	EBL	21	30	105	8	14	B				
220	Concession St / Grey St	TWSC	EBT	674	30	105	5	10	A				
220	Concession St / Grey St	TWSC	WBT	529	0	0	0	0	A				
220	Concession St / Grey St	TWSC	WBR	21	0	0	0	0	A				
230	Concession St / Alfred St	Signalized	NBL	109	15	35	17	24	C	27.0	C	12.0	B
230	Concession St / Alfred St	Signalized	NBT	10	15	35	20	27	C				
230	Concession St / Alfred St	Signalized	NBR	41	15	35	9	15	B				
230	Concession St / Alfred St	Signalized	SBL	2	5	20	14	22	C				
230	Concession St / Alfred St	Signalized	SBT	32	5	20	13	17	B				
230	Concession St / Alfred St	Signalized	SBR	34	5	20	4	9	A				
230	Concession St / Alfred St	Signalized	EBL	34	55	60	9	14	B				
230	Concession St / Alfred St	Signalized	EBT	500	55	60	7	11	B				
230	Concession St / Alfred St	Signalized	EBR	163	55	60	1	3	A				
230	Concession St / Alfred St	Signalized	WBL	33	35	80	10	18	B				
230	Concession St / Alfred St	Signalized	WBT	404	35	80	8	12	B				
230	Concession St / Alfred St	Signalized	WBR	0	35	80	0	0	A				
240	Concession St / Lansdowne St	TWSC	NBL	0	0	0	0	0	A	5.0	A	0.6	A
240	Concession St / Lansdowne St	TWSC	NBR	0	0	0	0	0	A				
240	Concession St / Lansdowne St	TWSC	EBT	545	0	0	0	1	A				
240	Concession St / Lansdowne St	TWSC	EBR	0	0	0	0	0	A				
240	Concession St / Lansdowne St	TWSC	WBL	12	0	0	3	5	A				
240	Concession St / Lansdowne St	TWSC	WBT	440	0	0	0	0	A				
250	Concession St / Division St	Signalized	NBL	15	25	50	22	31	C	38.0	D	20.9	C
250	Concession St / Division St	Signalized	NBT	213	25	50	15	20	B				
250	Concession St / Division St	Signalized	NBR	7	25	50	15	22	C				
250	Concession St / Division St	Signalized	SBL	32	50	105	18	26	C				
250	Concession St / Division St	Signalized	SBT	368	50	105	16	22	C				
250	Concession St / Division St	Signalized	SBR	202	50	105	2	6	A				
250	Concession St / Division St	Signalized	EBL	184	35	105	14	21	C				
250	Concession St / Division St	Signalized	EBT	359	35	105	12	17	B				
250	Concession St / Division St	Signalized	EBR	13	35	105	6	8	A				
250	Concession St / Division St	Signalized	WBL	19	40	70	29	38	D				
250	Concession St / Division St	Signalized	WBT	232	40	70	28	36	D				
250	Concession St / Division St	Signalized	WBR	17	40	70	21	29	C				



Williamsville Operational Analysis

2036 No Mitigation - Approved Growth, 22% Auto M.S. - AM Peak

Measures of Effectiveness Details



Node	Location	Control	Mvmt.	Volume (All)	Queue (m)		Stop Delay (s)	Delay (s)	LOS	Critical Mvmt		Intersection	
					50th	95th				Delay	LOS	Delay	LOS
260	Adelaide St / Division St	TWSC	NBL	19	0	20	2	3	A	8.0	A	0.2	A
260	Adelaide St / Division St	TWSC	NBT	232	0	20	0	0	A				
260	Adelaide St / Division St	TWSC	NBR	0	0	20	0	0	A				
260	Adelaide St / Division St	TWSC	SBL	14	0	30	0	1	A				
260	Adelaide St / Division St	TWSC	SBT	375	0	30	0	0	A				
260	Adelaide St / Division St	TWSC	SBR	9	0	30	0	0	A				
260	Adelaide St / Division St	TWSC	EBL	0	0	5	0	0	A				
260	Adelaide St / Division St	TWSC	EBT	0	0	5	0	0	A				
260	Adelaide St / Division St	TWSC	EBR	2	0	5	0	0	A				
260	Adelaide St / Division St	TWSC	WBL	0	0	5	0	0	A				
260	Adelaide St / Division St	TWSC	WBT	2	0	5	0	8	A				
260	Adelaide St / Division St	TWSC	WBR	5	0	5	0	7	A				
270	Stanley St / Division St	TWSC	NBL	16	0	0	1	3	A	10.0	A	1.8	A
270	Stanley St / Division St	TWSC	NBT	245	0	0	0	0	A				
270	Stanley St / Division St	TWSC	SBT	375	0	25	1	2	A				
270	Stanley St / Division St	TWSC	SBR	1	0	25	0	0	A				
270	Stanley St / Division St	TWSC	EBL	5	5	5	2	9	A				
270	Stanley St / Division St	TWSC	EBR	36	5	5	3	10	A				
280	Pine St / Division St	Signalized	NBL	9	5	30	10	17	B	30.0	C	8.8	A
280	Pine St / Division St	Signalized	NBT	203	5	30	3	5	A				
280	Pine St / Division St	Signalized	NBR	4	5	30	3	4	A				
280	Pine St / Division St	Signalized	SBL	33	20	70	4	7	A				
280	Pine St / Division St	Signalized	SBT	378	20	70	4	8	A				
280	Pine St / Division St	Signalized	SBR	0	20	70	0	0	A				
280	Pine St / Division St	Signalized	EBL	0	5	15	0	0	A				
280	Pine St / Division St	Signalized	EBT	32	5	15	24	30	C				
280	Pine St / Division St	Signalized	EBR	13	5	15	4	9	A				
280	Pine St / Division St	Signalized	WBL	18	5	20	20	26	C				
280	Pine St / Division St	Signalized	WBT	5	5	20	17	23	C				
280	Pine St / Division St	Signalized	WBR	57	5	20	4	9	A				
290	Quebec St / Division St	TWSC	NBT	218	0	0	0	0	A	10.0	A	0.9	A
290	Quebec St / Division St	TWSC	NBR	3	0	0	0	0	A				
290	Quebec St / Division St	TWSC	SBL	4	0	50	1	3	A				
290	Quebec St / Division St	TWSC	SBT	407	0	50	0	1	A				
290	Quebec St / Division St	TWSC	WBL	17	0	5	2	10	A				
290	Quebec St / Division St	TWSC	WBR	1	0	5	0	6	A				
300	York St / Division St	Signalized	NBL	0	20	35	0	0	A	30.0	C	7.5	A
300	York St / Division St	Signalized	NBT	191	20	35	3	5	A				
300	York St / Division St	Signalized	NBR	12	20	35	2	4	A				
300	York St / Division St	Signalized	SBL	38	10	35	4	8	A				
300	York St / Division St	Signalized	SBT	388	10	35	3	4	A				
300	York St / Division St	Signalized	SBR	0	10	35	0	0	A				
300	York St / Division St	Signalized	EBL	0	5	20	0	0	A				
300	York St / Division St	Signalized	EBT	46	5	20	24	28	C				
300	York St / Division St	Signalized	EBR	7	5	20	21	27	C				
300	York St / Division St	Signalized	WBL	9	5	20	22	26	C				
300	York St / Division St	Signalized	WBT	23	5	20	22	30	C				
300	York St / Division St	Signalized	WBR	27	5	20	4	11	B				
310	Main St / Division St	TWSC	NBT	200	0	10	1	2	A	9.0	A	0.8	A
310	Main St / Division St	TWSC	NBR	0	0	10	0	0	A				
310	Main St / Division St	TWSC	SBL	15	35	35	0	2	A				
310	Main St / Division St	TWSC	SBT	390	35	35	0	0	A				
310	Main St / Division St	TWSC	WBL	0	0	5	0	0	A				
310	Main St / Division St	TWSC	WBR	5	0	5	1	9	A				
320	Hamilton St / Division St	TWSC	NBL	0	0	0	0	0	A	9.0	A	0.1	A
320	Hamilton St / Division St	TWSC	NBT	192	0	0	0	0	A				
320	Hamilton St / Division St	TWSC	SBT	383	0	0	0	0	A				
320	Hamilton St / Division St	TWSC	SBR	6	0	0	0	0	A				
320	Hamilton St / Division St	TWSC	EBL	8	0	5	1	9	A				
320	Hamilton St / Division St	TWSC	EBR	2	0	5	0	6	A				



Williamsville Operational Analysis

2036 No Mitigation - Approved Growth, 22% Auto M.S. - AM Peak

Measures of Effectiveness Details

Node	Location	Control	Mvmt.	Volume (All)	Queue (m)		Stop Delay (s)	Delay (s)	LOS	Critical Mvmt		Intersection	
					50th	95th				Delay	LOS	Delay	LOS
330	Raglan St / Division St	TWSC	NBT	186	0	0	0	0	A	11.0	B	0.1	A
330	Raglan St / Division St	TWSC	NBR	6	0	0	0	0	A				
330	Raglan St / Division St	TWSC	SBL	15	0	0	0	1	A				
330	Raglan St / Division St	TWSC	SBT	371	0	0	0	0	A				
330	Raglan St / Division St	TWSC	WBL	2	0	5	3	11	B				
330	Raglan St / Division St	TWSC	WBR	5	0	5	0	7	A				
340	Elm St / Division St	TWSC	NBL	2	0	0	0	1	A	6.0	A	0.1	A
340	Elm St / Division St	TWSC	NBT	188	0	0	0	0	A				
340	Elm St / Division St	TWSC	SBT	371	0	0	0	0	A				
340	Elm St / Division St	TWSC	SBR	2	0	0	0	0	A				
340	Elm St / Division St	TWSC	EBL	4	0	5	1	6	A				
340	Elm St / Division St	TWSC	EBR	1	0	5	0	6	A				
350	Ellice St / Division St	TWSC	NBT	182	0	0	0	0	A	8.0	A	0.2	A
350	Ellice St / Division St	TWSC	NBR	8	0	0	0	0	A				
350	Ellice St / Division St	TWSC	SBL	8	0	0	0	1	A				
350	Ellice St / Division St	TWSC	SBT	366	0	0	0	0	A				
350	Ellice St / Division St	TWSC	WBL	4	0	5	1	8	A				
350	Ellice St / Division St	TWSC	WBR	7	0	5	0	7	A				
360	Colborne St / Division St	TWSC	NBL	0	0	20	0	0	A	12.0	B	1.8	A
360	Colborne St / Division St	TWSC	NBT	177	0	20	0	0	A				
360	Colborne St / Division St	TWSC	NBR	0	0	20	0	0	A				
360	Colborne St / Division St	TWSC	SBL	11	0	15	0	2	A				
360	Colborne St / Division St	TWSC	SBT	360	0	15	1	2	A				
360	Colborne St / Division St	TWSC	SBR	0	0	15	0	0	A				
360	Colborne St / Division St	TWSC	EBL	10	0	5	2	9	A				
360	Colborne St / Division St	TWSC	EBT	4	0	5	3	10	A				
360	Colborne St / Division St	TWSC	EBR	2	0	5	0	11	B				
360	Colborne St / Division St	TWSC	WBL	4	0	5	1	10	A				
360	Colborne St / Division St	TWSC	WBT	4	0	5	2	12	B				
360	Colborne St / Division St	TWSC	WBR	4	0	5	0	7	A				
370	Queen St / Division St	Signalized	NBT	56	15	25	7	9	A	20.0	B	14.7	B
370	Queen St / Division St	Signalized	NBR	123	15	25	1	10	A				
370	Queen St / Division St	Signalized	SBL	115	40	75	13	20	B				
370	Queen St / Division St	Signalized	SBT	250	40	75	14	20	B				
370	Queen St / Division St	Signalized	WBL	174	20	30	10	16	B				
370	Queen St / Division St	Signalized	WBR	119	20	30	0	4	A				



Williamsville Operational Analysis

2036 No Mitigation - Approved Growth, 22% Auto M.S. - PM Peak

Measures of Effectiveness Details

ID	Intersection Name	Control Type	Number of Vehicles	50th %ile Queue (m)	95th %ile Queue (m)	Avg. Vehicle Delay (sec)	Avg. Stop Delay (sec)	LOS
10	Princess St / Concession St	Signalized	3,314	51.1	84.9	31.2	25.5	C
20	Princess St / Regent St	TWSC	1,376	0.1	42.1	2.3	0.6	-
30	Princess St / Drayton Av	TWSC	1,305	3.6	32.6	2.4	0.4	-
40	Princess St / Macdonnell Av	Signalized	1,302	71.0	123.8	17.9	12.5	B
50	Princess St / Smith St	TWSC	1,063	35.6	66.3	5.2	3.2	-
60	Princess St / Victoria St	Signalized	1,362	27.3	71.9	11.2	6.3	B
70	Princess St / Nelson St	TWSC	1,298	10.6	85.7	4.9	2.0	-
80	Princess St / Albert St	Signalized	1,206	35.5	67.5	15.7	11.0	B
90	Princess St / Frontenac St	TWSC	1,063	0.0	32.7	2.2	0.7	-
100	Princess St / Alfred St	Signalized	1,422	58.6	77.3	25.1	17.9	C
110	Princess St / Chatham St	TWSC	1,168	12.4	78.2	5.8	2.2	-
120	Princess St / University Av	Signalized	1,095	25.2	49.7	7.3	4.0	A
130	Princess St / Division St	Signalized	1,454	20.7	57.0	13.7	9.1	B
140	Concession St / Drayton Av	TWSC	1,128	123.0	296.4	48.1	29.8	-
150	Concession St / Leroy Grant Dr (S)	TWSC	1,187	73.6	73.7	34.4	21.8	-
155	Concession St / Leroy Grant Drive (N)	TWSC	1,263	3.1	7.6	4.3	2.0	-
160	Concession St / Macdonnell St	Signalized	2,163	72.9	78.9	17.0	11.6	B
170	Concession St / Connaught St	TWSC	1,808	35.1	104.3	7.2	3.6	-
180	Concession St / Victoria St	Signalized	1,917	91.9	97.5	16.6	10.7	B
190	Concession St / Nelson St	TWSC	1,694	4.9	46.3	3.9	2.2	-
200	Concession St / Kingscourt Av	TWSC	1,637	0.0	79.4	2.2	1.1	-
210	Concession St / Fergus St	TWSC	1,636	0.0	66.9	2.2	0.6	-
220	Concession St / Grey St	TWSC	1,645	12.4	54.6	5.3	3.8	-
230	Concession St / Alfred St	Signalized	1,807	58.4	88.6	16.8	11.0	B
240	Concession St / Lansdowne St	TWSC	1,121	0.0	8.7	0.7	0.0	-
250	Concession St / Division St	Signalized	2,167	70.4	145.3	29.7	23.0	C
260	Adelaide St / Division St	TWSC	1,107	0.0	51.3	2.3	1.2	-
270	Stanley St / Division St	TWSC	1,092	0.3	12.2	1.6	0.5	-
280	Pine St / Division St	Signalized	1,157	22.2	66.5	9.2	5.7	A
290	Quebec St / Division St	TWSC	988	0.0	60.9	1.2	0.1	-
300	York St / Division St	Signalized	1,118	21.7	38.7	7.4	4.8	A
310	Main St / Division St	TWSC	971	26.4	47.9	3.4	1.7	-
320	Hamilton St / Division St	TWSC	981	0.0	11.0	1.2	0.6	-
330	Raglan St / Division St	TWSC	993	0.1	0.1	0.3	0.1	-
340	Elm St / Division St	TWSC	1,043	0.0	11.3	0.8	0.1	-
350	Ellice St / Division St	TWSC	1,005	0.0	14.3	0.5	0.0	-
360	Colborne St / Division St	TWSC	991	0.0	28.0	1.0	0.5	-
370	Queen St / Division St	Signalized	1,507	45.2	85.2	17.0	9.5	B
<b>Total</b>			<b>52,554</b>	<b>1,013</b>	<b>2,445</b>	<b>379</b>	<b>241</b>	

Williamsville Operational Analysis

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Measures of Effectiveness Details



Node	Location	Control	Mvmt.	Volume (All)	Queue (m)		Stop Delay (s)	Delay (s)	LOS	Critical Mvmt		Intersection	
					50th	95th				Delay	LOS	Delay	LOS
10	Princess St / Concession St	Signalized	NBL	317	40	80	33	40	D	51.0	D	31.2	C
10	Princess St / Concession St	Signalized	NBT	258	40	80	34	41	D				
10	Princess St / Concession St	Signalized	NBR	0	40	80	0	0	A				
10	Princess St / Concession St	Signalized	SBL	606	80	135	42	51	D				
10	Princess St / Concession St	Signalized	SBT	453	80	135	39	48	D				
10	Princess St / Concession St	Signalized	SBR	0	80	135	0	0	A				
10	Princess St / Concession St	Signalized	EBT	310	30	55	30	36	D				
10	Princess St / Concession St	Signalized	EBR	264	30	55	0	2	A				
10	Princess St / Concession St	Signalized	WBT	396	40	55	32	39	D				
10	Princess St / Concession St	Signalized	WBR	686	40	55	0	0	A				
10	Princess St / Concession St	Signalized	WBL	24	40	55	13	17	B				
20	Princess St / Regent St	TWSC	NBL	1	5	10	0	0	A	10.0	A	2.3	A
20	Princess St / Regent St	TWSC	NBR	33	5	10	3	10	A				
20	Princess St / Regent St	TWSC	EBT	646	0	15	0	2	A				
20	Princess St / Regent St	TWSC	EBR	72	0	15	0	1	A				
20	Princess St / Regent St	TWSC	WBL	34	0	75	5	8	A				
20	Princess St / Regent St	TWSC	WBT	590	0	75	1	2	A				
30	Princess St / Drayton Av	TWSC	SBL	4	45	55	17	35	D	35.0	D	2.4	A
30	Princess St / Drayton Av	TWSC	SBR	101	45	55	4	17	C				
30	Princess St / Drayton Av	TWSC	EBL	31	0	35	3	5	A				
30	Princess St / Drayton Av	TWSC	EBT	647	0	35	0	1	A				
30	Princess St / Drayton Av	TWSC	WBT	522	0	25	0	1	A				
30	Princess St / Drayton Av	TWSC	WBR	0	0	25	0	0	A				
40	Princess St / Macdonnell Av	Signalized	NBL	26	10	25	14	20	B	33.0	C	17.9	B
40	Princess St / Macdonnell Av	Signalized	NBT	84	10	25	12	17	B				
40	Princess St / Macdonnell Av	Signalized	NBR	14	10	25	5	10	A				
40	Princess St / Macdonnell Av	Signalized	SBL	0	15	40	0	0	A				
40	Princess St / Macdonnell Av	Signalized	SBT	39	15	40	12	17	B				
40	Princess St / Macdonnell Av	Signalized	SBR	35	15	40	4	11	B				
40	Princess St / Macdonnell Av	Signalized	EBL	29	105	200	25	33	C				
40	Princess St / Macdonnell Av	Signalized	EBT	573	105	200	14	21	C				
40	Princess St / Macdonnell Av	Signalized	EBR	33	105	200	9	15	B				
40	Princess St / Macdonnell Av	Signalized	WBL	8	50	60	20	29	C				
40	Princess St / Macdonnell Av	Signalized	WBT	461	50	60	11	14	B				
40	Princess St / Macdonnell Av	Signalized	WBR	0	50	60	0	0	A				
50	Princess St / Smith St	TWSC	SBL	4	40	40	8	16	C	25.0	C	5.2	A
50	Princess St / Smith St	TWSC	SBR	10	40	40	13	25	C				
50	Princess St / Smith St	TWSC	EBL	9	40	60	2	3	A				
50	Princess St / Smith St	TWSC	EBT	577	40	60	0	1	A				
50	Princess St / Smith St	TWSC	WBT	463	30	75	7	10	A				
50	Princess St / Smith St	TWSC	WBR	0	30	75	0	0	A				
60	Princess St / Victoria St	Signalized	NBL	15	20	50	20	31	C	31.0	C	11.2	B
60	Princess St / Victoria St	Signalized	NBT	44	20	50	18	26	C				
60	Princess St / Victoria St	Signalized	NBR	100	20	50	9	16	B				
60	Princess St / Victoria St	Signalized	SBL	9	5	20	15	22	C				
60	Princess St / Victoria St	Signalized	SBT	43	5	20	17	23	C				
60	Princess St / Victoria St	Signalized	SBR	12	5	20	2	5	A				
60	Princess St / Victoria St	Signalized	EBL	14	15	90	13	18	B				
60	Princess St / Victoria St	Signalized	EBT	546	15	90	2	6	A				
60	Princess St / Victoria St	Signalized	EBR	25	15	90	3	7	A				
60	Princess St / Victoria St	Signalized	WBL	18	45	65	15	19	B				
60	Princess St / Victoria St	Signalized	WBT	447	45	65	8	13	B				
60	Princess St / Victoria St	Signalized	WBR	89	45	65	6	11	B				
70	Princess St / Nelson St	TWSC	NBL	16	5	45	15	25	C	25.0	C	4.9	A
70	Princess St / Nelson St	TWSC	NBT	5	5	45	6	20	C				
70	Princess St / Nelson St	TWSC	NBR	2	5	45	7	19	C				
70	Princess St / Nelson St	TWSC	SBL	0	0	0	0	0	A				
70	Princess St / Nelson St	TWSC	SBT	0	0	0	0	0	A				
70	Princess St / Nelson St	TWSC	SBR	0	0	0	0	0	A				
70	Princess St / Nelson St	TWSC	EBL	198	20	105	3	8	A				
70	Princess St / Nelson St	TWSC	EBT	481	20	105	2	6	A				
70	Princess St / Nelson St	TWSC	EBR	3	20	105	0	5	A				
70	Princess St / Nelson St	TWSC	WBL	29	0	65	5	8	A				
70	Princess St / Nelson St	TWSC	WBT	550	0	65	1	2	A				
70	Princess St / Nelson St	TWSC	WBR	14	0	65	2	3	A				

Williamsville Operational Analysis

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Measures of Effectiveness Details



Node	Location	Control	Mvmt.	Volume (All)	Queue (m)		Stop Delay (s)	Delay (s)	LOS	Critical Mvmt		Intersection	
					50th	95th				Delay	LOS	Delay	LOS
80	Princess St / Albert St	Signalized	NBL	50	10	25	17	23	C	35.0	C	15.7	B
80	Princess St / Albert St	Signalized	NBT	13	10	25	13	19	B				
80	Princess St / Albert St	Signalized	NBR	43	10	25	4	9	A				
80	Princess St / Albert St	Signalized	SBL	1	5	15	0	0	A				
80	Princess St / Albert St	Signalized	SBT	27	5	15	16	20	B				
80	Princess St / Albert St	Signalized	SBR	30	5	15	3	7	A				
80	Princess St / Albert St	Signalized	EBL	37	45	80	26	35	C				
80	Princess St / Albert St	Signalized	EBT	447	45	80	12	17	B				
80	Princess St / Albert St	Signalized	EBR	13	45	80	12	17	B				
80	Princess St / Albert St	Signalized	WBL	8	35	70	17	21	C				
80	Princess St / Albert St	Signalized	WBT	525	35	70	9	13	B				
80	Princess St / Albert St	Signalized	WBR	12	35	70	14	20	B				
90	Princess St / Frontenac St	TWSC	NBL	2	0	5	2	9	A	13.0	B	2.2	A
90	Princess St / Frontenac St	TWSC	NBT	10	0	5	4	13	B				
90	Princess St / Frontenac St	TWSC	NBR	0	0	5	0	0	A				
90	Princess St / Frontenac St	TWSC	SBL	0	0	0	0	0	A				
90	Princess St / Frontenac St	TWSC	SBT	0	0	0	0	0	A				
90	Princess St / Frontenac St	TWSC	SBR	0	0	0	0	0	A				
90	Princess St / Frontenac St	TWSC	EBL	58	0	70	4	7	A				
90	Princess St / Frontenac St	TWSC	EBT	437	0	70	1	4	A				
90	Princess St / Frontenac St	TWSC	EBR	0	0	70	0	0	A				
90	Princess St / Frontenac St	TWSC	WBL	0	0	0	0	0	A				
90	Princess St / Frontenac St	TWSC	WBT	544	0	0	0	0	A				
90	Princess St / Frontenac St	TWSC	WBR	12	0	0	0	1	A				
100	Princess St / Alfred St	Signalized	NBL	47	25	55	13	21	C	49.0	D	25.1	C
100	Princess St / Alfred St	Signalized	NBT	116	25	55	13	19	B				
100	Princess St / Alfred St	Signalized	NBR	116	25	55	7	14	B				
100	Princess St / Alfred St	Signalized	SBL	61	10	25	19	27	C				
100	Princess St / Alfred St	Signalized	SBT	51	10	25	16	22	C				
100	Princess St / Alfred St	Signalized	SBR	15	10	25	10	17	B				
100	Princess St / Alfred St	Signalized	EBL	12	60	90	41	49	D				
100	Princess St / Alfred St	Signalized	EBT	426	60	90	19	27	C				
100	Princess St / Alfred St	Signalized	EBR	15	60	90	18	26	C				
100	Princess St / Alfred St	Signalized	WBL	34	85	90	13	20	B				
100	Princess St / Alfred St	Signalized	WBT	492	85	90	22	29	C				
100	Princess St / Alfred St	Signalized	WBR	37	85	90	6	10	A				
110	Princess St / Chatham St	TWSC	SBL	0	0	5	0	0	A	31.0	D	5.8	A
110	Princess St / Chatham St	TWSC	SBR	3	0	5	14	31	D				
110	Princess St / Chatham St	TWSC	EBL	110	10	105	4	9	A				
110	Princess St / Chatham St	TWSC	EBT	491	10	105	2	7	A				
110	Princess St / Chatham St	TWSC	WBT	557	15	50	2	4	A				
110	Princess St / Chatham St	TWSC	WBR	7	15	50	1	3	A				
120	Princess St / University Av	Signalized	NBL	73	5	25	16	22	C	22.0	C	7.3	A
120	Princess St / University Av	Signalized	NBR	23	5	25	4	9	A				
120	Princess St / University Av	Signalized	EBT	448	45	70	4	8	A				
120	Princess St / University Av	Signalized	EBR	40	45	70	3	7	A				
120	Princess St / University Av	Signalized	WBL	25	10	35	8	13	B				
120	Princess St / University Av	Signalized	WBT	486	10	35	2	4	A				
130	Princess St / Division St	Signalized	NBL	72	20	40	13	23	C	27.0	C	13.7	B
130	Princess St / Division St	Signalized	NBT	156	20	40	14	20	B				
130	Princess St / Division St	Signalized	NBR	10	20	40	8	13	B				
130	Princess St / Division St	Signalized	SBL	195	15	70	6	10	A				
130	Princess St / Division St	Signalized	SBT	108	15	70	3	4	A				
130	Princess St / Division St	Signalized	SBR	443	15	70	0	1	A				
130	Princess St / Division St	Signalized	EBL	127	30	45	19	26	C				
130	Princess St / Division St	Signalized	EBT	309	30	45	19	27	C				
130	Princess St / Division St	Signalized	EBR	34	30	45	7	14	B				

Williamsville Operational Analysis

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Measures of Effectiveness Details



Node	Location	Control	Mvmt.	Volume (All)	Queue (m)		Stop Delay (s)	Delay (s)	LOS	Critical Mvmt		Intersection	
					50th	95th				Delay	LOS	Delay	LOS
140	Concession St / Drayton Av	TWSC	NBR	22	20	115	665	695	F	695.0	F	48.1	E
140	Concession St / Drayton Av	TWSC	EBT	1,066	125	300	17	35	D				
140	Concession St / Drayton Av	TWSC	EBR	40	125	300	21	42	E				
150	Concession St / Leroy Grant Dr (S)	TWSC	SBL	22	0	5	12	26	D	48.0	E	34.4	D
150	Concession St / Leroy Grant Dr (S)	TWSC	EBL	190	75	75	37	48	E				
150	Concession St / Leroy Grant Dr (S)	TWSC	EBT	975	75	75	19	32	D				
155	Concession St / Leroy Grant Drive (N)	TWSC	NBL	101	20	50	12	25	C	28.0	D	4.3	A
155	Concession St / Leroy Grant Drive (N)	TWSC	NBT	89	20	50	13	28	D				
155	Concession St / Leroy Grant Drive (N)	TWSC	SBT	22	5	5	6	17	C				
155	Concession St / Leroy Grant Drive (N)	TWSC	SBR	6	5	5	0	0	A				
155	Concession St / Leroy Grant Drive (N)	TWSC	WBT	1,007	0	0	0	0	A				
155	Concession St / Leroy Grant Drive (N)	TWSC	WBR	38	0	0	0	1	A				
160	Concession St / Macdonnell St	Signalized	NBL	101	20	35	22	28	C	71.0	E	17.0	B
160	Concession St / Macdonnell St	Signalized	NBT	26	20	35	21	27	C				
160	Concession St / Macdonnell St	Signalized	NBR	36	20	35	20	27	C				
160	Concession St / Macdonnell St	Signalized	SBR	68	5	15	5	9	A				
160	Concession St / Macdonnell St	Signalized	EBL	60	75	80	49	60	E				
160	Concession St / Macdonnell St	Signalized	EBT	848	75	80	8	13	B				
160	Concession St / Macdonnell St	Signalized	EBR	97	75	80	7	12	B				
160	Concession St / Macdonnell St	Signalized	WBL	50	85	90	58	71	E				
160	Concession St / Macdonnell St	Signalized	WBT	877	85	90	9	14	B				
160	Concession St / Macdonnell St	Signalized	WBR	0	85	90	0	0	A				
170	Concession St / Connaught St	TWSC	SBL	0	0	5	0	0	A	23.0	C	7.2	A
170	Concession St / Connaught St	TWSC	SBR	15	0	5	14	23	C				
170	Concession St / Connaught St	TWSC	EBL	0	10	95	0	0	A				
170	Concession St / Connaught St	TWSC	EBT	883	10	95	2	5	A				
170	Concession St / Connaught St	TWSC	WBT	910	60	115	5	9	A				
170	Concession St / Connaught St	TWSC	WBR	0	60	115	0	0	A				
180	Concession St / Victoria St	Signalized	NBL	69	20	65	38	48	D	54.0	D	16.6	B
180	Concession St / Victoria St	Signalized	NBT	45	20	65	45	54	D				
180	Concession St / Victoria St	Signalized	NBR	23	20	65	39	50	D				
180	Concession St / Victoria St	Signalized	SBL	0	0	10	0	0	A				
180	Concession St / Victoria St	Signalized	SBT	20	0	10	21	26	C				
180	Concession St / Victoria St	Signalized	SBR	34	0	10	7	17	B				
180	Concession St / Victoria St	Signalized	EBL	31	115	115	15	22	C				
180	Concession St / Victoria St	Signalized	EBT	793	115	115	7	13	B				
180	Concession St / Victoria St	Signalized	EBR	64	115	115	8	15	B				
180	Concession St / Victoria St	Signalized	WBL	22	85	90	24	32	C				
180	Concession St / Victoria St	Signalized	WBT	802	85	90	9	14	B				
180	Concession St / Victoria St	Signalized	WBR	14	85	90	0	1	A				
190	Concession St / Nelson St	TWSC	NBL	7	0	5	25	36	E	36.0	E	3.9	A
190	Concession St / Nelson St	TWSC	NBT	0	0	5	0	0	A				
190	Concession St / Nelson St	TWSC	NBR	39	0	5	7	15	B				
190	Concession St / Nelson St	TWSC	SBL	0	0	5	0	0	A				
190	Concession St / Nelson St	TWSC	SBT	0	0	5	0	0	A				
190	Concession St / Nelson St	TWSC	SBR	11	0	5	0	6	A				
190	Concession St / Nelson St	TWSC	EBL	0	0	0	0	0	A				
190	Concession St / Nelson St	TWSC	EBT	765	0	0	0	0	A				
190	Concession St / Nelson St	TWSC	EBR	50	0	0	0	0	A				
190	Concession St / Nelson St	TWSC	WBL	7	10	95	5	10	A				
190	Concession St / Nelson St	TWSC	WBT	815	10	95	4	7	A				
190	Concession St / Nelson St	TWSC	WBR	0	10	95	0	0	A				

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Measures of Effectiveness Details



Node	Location	Control	Mvmt.	Volume (All)	Queue (m)		Stop Delay (s)	Delay (s)	LOS	Critical Mvmt		Intersection	
					50th	95th				Delay	LOS	Delay	LOS
200	Concession St / Kingscourt Av	TWSC	SBL	0	0	15	0	0	A	23.0	C	2.2	A
200	Concession St / Kingscourt Av	TWSC	SBR	16	0	15	11	23	C				
200	Concession St / Kingscourt Av	TWSC	EBL	2	0	65	1	9	A				
200	Concession St / Kingscourt Av	TWSC	EBT	808	0	65	1	1	A				
200	Concession St / Kingscourt Av	TWSC	WBT	811	0	95	1	3	A				
200	Concession St / Kingscourt Av	TWSC	WBR	0	0	95	0	0	A				
210	Concession St / Fergus St	TWSC	SBL	11	0	5	20	30	D	30.0	D	2.2	A
210	Concession St / Fergus St	TWSC	SBR	0	0	5	0	0	A				
210	Concession St / Fergus St	TWSC	EBL	0	0	95	0	0	A				
210	Concession St / Fergus St	TWSC	EBT	807	0	95	1	3	A				
210	Concession St / Fergus St	TWSC	WBT	813	0	40	0	1	A				
210	Concession St / Fergus St	TWSC	WBR	5	0	40	0	0	A				
220	Concession St / Grey St	TWSC	SBL	6	0	5	57	68	F	68.0	F	5.3	A
220	Concession St / Grey St	TWSC	SBR	10	0	5	14	22	C				
220	Concession St / Grey St	TWSC	EBL	0	25	100	0	0	A				
220	Concession St / Grey St	TWSC	EBT	816	25	100	7	10	A				
220	Concession St / Grey St	TWSC	WBT	808	0	10	0	0	A				
220	Concession St / Grey St	TWSC	WBR	5	0	10	0	0	A				
230	Concession St / Alfred St	Signalized	NBL	214	40	90	18	28	C	33.0	C	16.8	B
230	Concession St / Alfred St	Signalized	NBT	32	40	90	24	33	C				
230	Concession St / Alfred St	Signalized	NBR	34	40	90	13	22	C				
230	Concession St / Alfred St	Signalized	SBL	0	5	20	0	0	A				
230	Concession St / Alfred St	Signalized	SBT	34	5	20	15	21	C				
230	Concession St / Alfred St	Signalized	SBR	20	5	20	4	9	A				
230	Concession St / Alfred St	Signalized	EBL	23	55	60	18	24	C				
230	Concession St / Alfred St	Signalized	EBT	480	55	60	11	15	B				
230	Concession St / Alfred St	Signalized	EBR	322	55	60	2	4	A				
230	Concession St / Alfred St	Signalized	WBL	68	75	130	13	23	C				
230	Concession St / Alfred St	Signalized	WBT	580	75	130	12	19	B				
230	Concession St / Alfred St	Signalized	WBR	0	75	130	0	0	A				
240	Concession St / Lansdowne St	TWSC	NBL	0	0	0	0	0	A	5.0	A	0.7	A
240	Concession St / Lansdowne St	TWSC	NBR	0	0	0	0	0	A				
240	Concession St / Lansdowne St	TWSC	EBT	468	0	0	0	0	A				
240	Concession St / Lansdowne St	TWSC	EBR	0	0	0	0	0	A				
240	Concession St / Lansdowne St	TWSC	WBL	27	0	15	2	5	A				
240	Concession St / Lansdowne St	TWSC	WBT	626	0	15	0	1	A				
250	Concession St / Division St	Signalized	NBL	37	85	115	25	34	C	58.0	E	29.7	C
250	Concession St / Division St	Signalized	NBT	547	85	115	19	25	C				
250	Concession St / Division St	Signalized	NBR	13	85	115	14	19	B				
250	Concession St / Division St	Signalized	SBL	29	65	180	28	38	D				
250	Concession St / Division St	Signalized	SBT	449	65	180	19	25	C				
250	Concession St / Division St	Signalized	SBR	195	65	180	5	10	A				
250	Concession St / Division St	Signalized	EBL	210	30	75	20	27	C				
250	Concession St / Division St	Signalized	EBT	209	30	75	12	17	B				
250	Concession St / Division St	Signalized	EBR	33	30	75	3	6	A				
250	Concession St / Division St	Signalized	WBL	11	100	205	44	53	D				
250	Concession St / Division St	Signalized	WBT	402	100	205	48	58	E				
250	Concession St / Division St	Signalized	WBR	32	100	205	42	51	D				



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2036 No Mitigation - Approved Growth, 22% Auto M.S. - PM Peak

Measures of Effectiveness Details



Node	Location	Control	Mvmt.	Volume (All)	Queue (m)		Stop Delay (s)	Delay (s)	LOS	Critical Mvmt		Intersection	
					50th	95th				Delay	LOS	Delay	LOS
260	Adelaide St / Division St	TWSC	NBL	0	0	70	0	0	A	26.0	D	2.3	A
260	Adelaide St / Division St	TWSC	NBT	599	0	70	2	3	A				
260	Adelaide St / Division St	TWSC	NBR	0	0	70	0	0	A				
260	Adelaide St / Division St	TWSC	SBL	0	0	30	0	0	A				
260	Adelaide St / Division St	TWSC	SBT	434	0	30	0	1	A				
260	Adelaide St / Division St	TWSC	SBR	59	0	30	0	0	A				
260	Adelaide St / Division St	TWSC	EBL	3	0	5	16	26	D				
260	Adelaide St / Division St	TWSC	EBT	0	0	5	0	0	A				
260	Adelaide St / Division St	TWSC	EBR	0	0	5	0	0	A				
260	Adelaide St / Division St	TWSC	WBL	0	0	5	0	0	A				
260	Adelaide St / Division St	TWSC	WBT	12	0	5	6	16	C				
260	Adelaide St / Division St	TWSC	WBR	0	0	5	0	0	A				
270	Stanley St / Division St	TWSC	NBL	0	0	0	0	0	A	14.0	B	1.6	A
270	Stanley St / Division St	TWSC	NBT	592	0	0	0	0	A				
270	Stanley St / Division St	TWSC	SBT	367	0	30	1	3	A				
270	Stanley St / Division St	TWSC	SBR	68	0	30	1	1	A				
270	Stanley St / Division St	TWSC	EBL	8	5	5	5	14	B				
270	Stanley St / Division St	TWSC	EBR	57	5	5	2	9	A				
280	Pine St / Division St	Signalized	NBL	37	20	75	9	16	B	39.0	D	9.2	A
280	Pine St / Division St	Signalized	NBT	521	20	75	4	6	A				
280	Pine St / Division St	Signalized	NBR	14	20	75	4	5	A				
280	Pine St / Division St	Signalized	SBL	32	30	70	10	17	B				
280	Pine St / Division St	Signalized	SBT	389	30	70	4	8	A				
280	Pine St / Division St	Signalized	SBR	7	30	70	2	6	A				
280	Pine St / Division St	Signalized	EBL	7	5	15	29	37	D				
280	Pine St / Division St	Signalized	EBT	25	5	15	23	28	C				
280	Pine St / Division St	Signalized	EBR	12	5	15	4	9	A				
280	Pine St / Division St	Signalized	WBL	5	10	30	30	39	D				
280	Pine St / Division St	Signalized	WBT	44	10	30	20	26	C				
280	Pine St / Division St	Signalized	WBR	64	10	30	5	11	B				
290	Quebec St / Division St	TWSC	NBT	570	0	70	0	1	A	14.0	B	1.2	A
290	Quebec St / Division St	TWSC	NBR	0	0	70	0	0	A				
290	Quebec St / Division St	TWSC	SBL	0	0	50	0	0	A				
290	Quebec St / Division St	TWSC	SBT	405	0	50	0	1	A				
290	Quebec St / Division St	TWSC	WBL	13	0	5	6	14	B				
290	Quebec St / Division St	TWSC	WBR	0	0	5	0	0	A				
300	York St / Division St	Signalized	NBL	0	35	35	0	0	A	34.0	C	7.4	A
300	York St / Division St	Signalized	NBT	521	35	35	2	4	A				
300	York St / Division St	Signalized	NBR	12	35	35	2	3	A				
300	York St / Division St	Signalized	SBL	15	10	50	12	16	B				
300	York St / Division St	Signalized	SBT	408	10	50	3	5	A				
300	York St / Division St	Signalized	SBR	0	10	50	0	0	A				
300	York St / Division St	Signalized	EBL	0	5	15	0	0	A				
300	York St / Division St	Signalized	EBT	51	5	15	24	29	C				
300	York St / Division St	Signalized	EBR	6	5	15	16	20	B				
300	York St / Division St	Signalized	WBL	14	10	25	27	34	C				
300	York St / Division St	Signalized	WBT	41	10	25	23	30	C				
300	York St / Division St	Signalized	WBR	50	10	25	6	12	B				
310	Main St / Division St	TWSC	NBT	533	20	55	3	6	A	11.0	B	3.4	A
310	Main St / Division St	TWSC	NBR	0	20	55	0	0	A				
310	Main St / Division St	TWSC	SBL	0	35	40	0	0	A				
310	Main St / Division St	TWSC	SBT	429	35	40	0	0	A				
310	Main St / Division St	TWSC	WBL	9	0	5	4	11	B				
310	Main St / Division St	TWSC	WBR	0	0	5	0	0	A				
320	Hamilton St / Division St	TWSC	NBL	12	0	20	2	4	A	10.0	A	1.2	A
320	Hamilton St / Division St	TWSC	NBT	527	0	20	1	2	A				
320	Hamilton St / Division St	TWSC	SBT	435	0	0	0	0	A				
320	Hamilton St / Division St	TWSC	SBR	2	0	0	0	0	A				
320	Hamilton St / Division St	TWSC	EBL	4	0	5	3	10	A				
320	Hamilton St / Division St	TWSC	EBR	1	0	5	0	6	A				



Williamsville Operational Analysis

2036 No Mitigation - Approved Growth, 22% Auto M.S. - PM Peak

Measures of Effectiveness Details

Node	Location	Control	Mvmt.	Volume (All)	Queue (m)		Stop Delay (s)	Delay (s)	LOS	Critical Mvmt		Intersection	
					50th	95th				Delay	LOS	Delay	LOS
330	Raglan St / Division St	TWSC	NBT	528	0	0	0	0	A	12.0	B	0.3	A
330	Raglan St / Division St	TWSC	NBR	2	0	0	0	0	A				
330	Raglan St / Division St	TWSC	SBL	0	0	0	0	0	A				
330	Raglan St / Division St	TWSC	SBT	436	0	0	0	0	A				
330	Raglan St / Division St	TWSC	WBL	15	5	5	3	12	B				
330	Raglan St / Division St	TWSC	WBR	12	5	5	3	11	B				
340	Elm St / Division St	TWSC	NBL	58	0	20	1	3	A	8.0	A	0.8	A
340	Elm St / Division St	TWSC	NBT	527	0	20	0	1	A				
340	Elm St / Division St	TWSC	SBT	413	0	0	0	0	A				
340	Elm St / Division St	TWSC	SBR	38	0	0	0	1	A				
340	Elm St / Division St	TWSC	EBL	3	0	5	1	8	A				
340	Elm St / Division St	TWSC	EBR	4	0	5	0	7	A				
350	Ellice St / Division St	TWSC	NBT	572	0	25	0	0	A	8.0	A	0.5	A
350	Ellice St / Division St	TWSC	NBR	2	0	25	0	0	A				
350	Ellice St / Division St	TWSC	SBL	6	0	0	2	4	A				
350	Ellice St / Division St	TWSC	SBT	412	0	0	0	1	A				
350	Ellice St / Division St	TWSC	WBL	0	0	5	0	0	A				
350	Ellice St / Division St	TWSC	WBR	13	0	5	1	8	A				
360	Colborne St / Division St	TWSC	NBL	2	0	20	0	3	A	14.0	B	1.0	A
360	Colborne St / Division St	TWSC	NBT	559	0	20	0	0	A				
360	Colborne St / Division St	TWSC	NBR	0	0	20	0	0	A				
360	Colborne St / Division St	TWSC	SBL	3	0	40	2	8	A				
360	Colborne St / Division St	TWSC	SBT	405	0	40	1	2	A				
360	Colborne St / Division St	TWSC	SBR	2	0	40	0	1	A				
360	Colborne St / Division St	TWSC	EBL	2	0	5	6	14	B				
360	Colborne St / Division St	TWSC	EBT	5	0	5	3	13	B				
360	Colborne St / Division St	TWSC	EBR	0	0	5	0	0	A				
360	Colborne St / Division St	TWSC	WBL	0	0	5	0	0	A				
360	Colborne St / Division St	TWSC	WBT	0	0	5	0	0	A				
360	Colborne St / Division St	TWSC	WBR	13	0	5	1	8	A				
370	Queen St / Division St	Signalized	NBT	182	10	50	6	8	A	28.0	C	17.0	B
370	Queen St / Division St	Signalized	NBR	100	10	50	1	9	A				
370	Queen St / Division St	Signalized	SBL	95	50	80	17	26	C				
370	Queen St / Division St	Signalized	SBT	313	50	80	13	19	B				
370	Queen St / Division St	Signalized	WBL	437	55	100	16	28	C				
370	Queen St / Division St	Signalized	WBR	380	55	100	1	7	A				



Williamsville Operational Analysis

2036 No Mitigation - Approved Growth, 35% Auto M.S. - AM Peak

Measures of Effectiveness Details

ID	Intersection Name	Control Type	Number of Vehicles	50th %ile Queue (m)	95th %ile Queue (m)	Avg. Vehicle Delay (sec)	Avg. Stop Delay (sec)	LOS
10	Princess St / Concession St	Signalized	2,667	40.2	62.2	26.6	21.3	C
20	Princess St / Regent St	TWSC	1,052	0.2	55.1	3.1	0.2	-
30	Princess St / Drayton Av	TWSC	1,005	0.0	58.5	1.8	0.1	-
40	Princess St / Macdonnell Av	Signalized	942	49.4	106.5	15.9	10.2	B
50	Princess St / Smith St	TWSC	782	28.2	35.6	0.9	0.3	-
60	Princess St / Victoria St	Signalized	1,012	12.7	59.2	7.9	4.1	A
70	Princess St / Nelson St	TWSC	930	1.4	16.3	2.0	0.4	-
80	Princess St / Albert St	Signalized	959	25.1	62.8	13.0	9.1	B
90	Princess St / Frontenac St	TWSC	856	0.0	27.1	0.9	0.0	-
100	Princess St / Alfred St	Signalized	1,205	44.8	69.9	23.6	16.6	C
110	Princess St / Chatham St	TWSC	845	0.0	30.5	1.5	0.0	-
120	Princess St / University Av	Signalized	824	15.2	53.1	5.6	2.8	A
130	Princess St / Division St	Signalized	1,015	17.7	54.0	16.7	11.7	B
140	Concession St / Drayton Av	TWSC	939	0.2	120.6	7.2	3.9	-
150	Concession St / Leroy Grant Dr (S)	TWSC	913	45.0	74.9	6.9	2.9	-
155	Concession St / Leroy Grant Drive (N)	TWSC	775	0.3	0.6	0.6	0.2	-
160	Concession St / Macdonnell St	Signalized	1,568	49.4	63.3	9.6	6.2	A
170	Concession St / Connaught St	TWSC	1,303	0.0	52.2	1.3	0.6	-
180	Concession St / Victoria St	Signalized	1,391	33.8	74.5	11.8	7.5	B
190	Concession St / Nelson St	TWSC	1,240	0.1	56.3	1.9	0.2	-
200	Concession St / Kingscourt Av	TWSC	1,231	0.2	43.1	2.7	1.2	-
210	Concession St / Fergus St	TWSC	1,261	0.2	53.8	4.4	2.3	-
220	Concession St / Grey St	TWSC	1,290	19.0	57.6	9.9	6.7	-
230	Concession St / Alfred St	Signalized	1,382	43.3	62.8	13.0	8.3	B
240	Concession St / Lansdowne St	TWSC	1,010	0.0	12.8	1.1	0.0	-
250	Concession St / Division St	Signalized	1,673	39.8	93.2	20.4	14.8	C
260	Adelaide St / Division St	TWSC	658	0.0	25.8	0.2	0.1	-
270	Stanley St / Division St	TWSC	679	0.3	11.3	1.8	0.7	-
280	Pine St / Division St	Signalized	751	17.4	49.9	8.3	5.1	A
290	Quebec St / Division St	TWSC	649	0.0	31.7	0.9	0.0	-
300	York St / Division St	Signalized	739	12.0	32.7	7.4	4.8	A
310	Main St / Division St	TWSC	605	23.3	26.6	0.8	0.3	-
320	Hamilton St / Division St	TWSC	592	0.0	0.1	0.1	0.0	-
330	Raglan St / Division St	TWSC	590	0.0	9.9	0.8	0.0	-
340	Elm St / Division St	TWSC	571	0.0	0.1	0.1	0.0	-
350	Ellice St / Division St	TWSC	576	0.0	0.1	0.2	0.0	-
360	Colborne St / Division St	TWSC	576	0.1	16.2	1.1	0.7	-
370	Queen St / Division St	Signalized	837	28.7	48.5	14.8	8.7	B
<b>Total</b>			<b>37,893</b>	<b>548</b>	<b>1,710</b>	<b>247</b>	<b>152</b>	



Williamsville Operational Analysis

2036 No Mitigation - Approved Growth, 35% Auto M.S. - AM Peak

Measures of Effectiveness Details

Node	Location	Control	Mvmt.	Volume (All)	Queue (m)		Stop Delay (s)	Delay (s)	LOS	Critical Mvmt		Intersection	
					50th	95th				Delay	LOS	Delay	LOS
10	Princess St / Concession St	Signalized	NBL	149	25	40	41	48	D	48.0	D	26.6	C
10	Princess St / Concession St	Signalized	NBT	100	25	40	35	42	D				
10	Princess St / Concession St	Signalized	NBR	32	25	40	0	2	A				
10	Princess St / Concession St	Signalized	SBL	505	65	95	29	37	D				
10	Princess St / Concession St	Signalized	SBT	495	65	95	29	38	D				
10	Princess St / Concession St	Signalized	SBR	30	65	95	14	18	B				
10	Princess St / Concession St	Signalized	EBT	398	30	50	28	33	C				
10	Princess St / Concession St	Signalized	EBR	224	30	50	0	2	A				
10	Princess St / Concession St	Signalized	WBT	244	20	35	26	31	C				
10	Princess St / Concession St	Signalized	WBR	402	20	35	0	0	A				
10	Princess St / Concession St	Signalized	WBL	88	20	35	2	4	A				
20	Princess St / Regent St	TWSC	NBL	0	5	10	0	0	A	12.0	B	3.1	A
20	Princess St / Regent St	TWSC	NBR	33	5	10	4	12	B				
20	Princess St / Regent St	TWSC	EBT	669	0	80	0	4	A				
20	Princess St / Regent St	TWSC	EBR	52	0	80	1	2	A				
20	Princess St / Regent St	TWSC	WBL	7	0	0	3	6	A				
20	Princess St / Regent St	TWSC	WBT	291	0	0	0	0	A				
30	Princess St / Drayton Av	TWSC	SBL	0	0	0	0	0	A	3.0	A	1.8	A
30	Princess St / Drayton Av	TWSC	SBR	0	0	0	0	0	A				
30	Princess St / Drayton Av	TWSC	EBL	137	0	75	1	3	A				
30	Princess St / Drayton Av	TWSC	EBT	567	0	75	0	2	A				
30	Princess St / Drayton Av	TWSC	WBT	299	0	20	0	1	A				
30	Princess St / Drayton Av	TWSC	WBR	2	0	20	0	0	A				
40	Princess St / Macdonnell Av	Signalized	NBL	43	5	25	12	18	B	27.0	C	15.9	B
40	Princess St / Macdonnell Av	Signalized	NBT	17	5	25	12	17	B				
40	Princess St / Macdonnell Av	Signalized	NBR	26	5	25	6	12	B				
40	Princess St / Macdonnell Av	Signalized	SBL	10	40	40	14	18	B				
40	Princess St / Macdonnell Av	Signalized	SBT	16	40	40	7	10	A				
40	Princess St / Macdonnell Av	Signalized	SBR	27	40	40	3	11	B				
40	Princess St / Macdonnell Av	Signalized	EBL	33	70	150	14	21	C				
40	Princess St / Macdonnell Av	Signalized	EBT	499	70	150	11	17	B				
40	Princess St / Macdonnell Av	Signalized	EBR	27	70	150	8	13	B				
40	Princess St / Macdonnell Av	Signalized	WBL	7	20	50	18	27	C				
40	Princess St / Macdonnell Av	Signalized	WBT	227	20	50	9	14	B				
40	Princess St / Macdonnell Av	Signalized	WBR	10	20	50	6	10	A				
50	Princess St / Smith St	TWSC	SBL	2	40	40	0	9	A	14.0	B	0.9	A
50	Princess St / Smith St	TWSC	SBR	15	40	40	2	14	B				
50	Princess St / Smith St	TWSC	EBL	4	40	40	0	1	A				
50	Princess St / Smith St	TWSC	EBT	531	40	40	0	0	A				
50	Princess St / Smith St	TWSC	WBT	230	0	25	1	2	A				
50	Princess St / Smith St	TWSC	WBR	0	0	25	0	0	A				
60	Princess St / Victoria St	Signalized	NBL	27	10	35	16	25	C	26.0	C	7.9	A
60	Princess St / Victoria St	Signalized	NBT	29	10	35	19	26	C				
60	Princess St / Victoria St	Signalized	NBR	44	10	35	6	12	B				
60	Princess St / Victoria St	Signalized	SBL	7	5	20	18	25	C				
60	Princess St / Victoria St	Signalized	SBT	61	5	20	15	20	B				
60	Princess St / Victoria St	Signalized	SBR	2	5	20	0	0	A				
60	Princess St / Victoria St	Signalized	EBL	10	10	80	10	16	B				
60	Princess St / Victoria St	Signalized	EBT	515	10	80	1	4	A				
60	Princess St / Victoria St	Signalized	EBR	8	10	80	1	3	A				
60	Princess St / Victoria St	Signalized	WBL	22	20	40	10	16	B				
60	Princess St / Victoria St	Signalized	WBT	202	20	40	4	7	A				
60	Princess St / Victoria St	Signalized	WBR	85	20	40	3	7	A				
70	Princess St / Nelson St	TWSC	NBL	9	40	45	4	17	C	21.0	C	2.0	A
70	Princess St / Nelson St	TWSC	NBT	12	40	45	8	20	C				
70	Princess St / Nelson St	TWSC	NBR	11	40	45	6	16	C				
70	Princess St / Nelson St	TWSC	SBL	8	0	5	7	21	C				
70	Princess St / Nelson St	TWSC	SBT	0	0	5	0	0	A				
70	Princess St / Nelson St	TWSC	SBR	9	0	5	2	16	C				
70	Princess St / Nelson St	TWSC	EBL	31	0	5	0	2	A				
70	Princess St / Nelson St	TWSC	EBT	534	0	5	0	1	A				
70	Princess St / Nelson St	TWSC	EBR	7	0	5	0	1	A				
70	Princess St / Nelson St	TWSC	WBL	14	0	35	5	8	A				
70	Princess St / Nelson St	TWSC	WBT	295	0	35	0	1	A				
70	Princess St / Nelson St	TWSC	WBR	0	0	35	0	0	A				

Williamsville Operational Analysis

2036 No Mitigation - Approved Growth, 35% Auto M.S. - AM Peak

Measures of Effectiveness Details



Node	Location	Control	Mvmt.	Volume (All)	Queue (m)		Stop Delay (s)	Delay (s)	LOS	Critical Mvmt		Intersection	
					50th	95th				Delay	LOS	Delay	LOS
80	Princess St / Albert St	Signalized	NBL	13	5	15	13	18	B	31.0	C	13.0	B
80	Princess St / Albert St	Signalized	NBT	17	5	15	12	16	B				
80	Princess St / Albert St	Signalized	NBR	27	5	15	3	8	A				
80	Princess St / Albert St	Signalized	SBL	11	5	20	14	24	C				
80	Princess St / Albert St	Signalized	SBT	31	5	20	12	15	B				
80	Princess St / Albert St	Signalized	SBR	35	5	20	3	10	A				
80	Princess St / Albert St	Signalized	EBL	2	35	90	17	21	C				
80	Princess St / Albert St	Signalized	EBT	535	35	90	11	15	B				
80	Princess St / Albert St	Signalized	EBR	15	35	90	12	15	B				
80	Princess St / Albert St	Signalized	WBL	8	15	30	25	31	C				
80	Princess St / Albert St	Signalized	WBT	264	15	30	5	8	A				
80	Princess St / Albert St	Signalized	WBR	1	15	30	0	0	A				
90	Princess St / Frontenac St	TWSC	NBL	2	0	5	2	9	A	9.0	A	0.9	A
90	Princess St / Frontenac St	TWSC	NBT	0	0	5	0	0	A				
90	Princess St / Frontenac St	TWSC	NBR	0	0	5	0	0	A				
90	Princess St / Frontenac St	TWSC	SBL	0	0	5	0	0	A				
90	Princess St / Frontenac St	TWSC	SBT	0	0	5	0	0	A				
90	Princess St / Frontenac St	TWSC	SBR	12	0	5	0	7	A				
90	Princess St / Frontenac St	TWSC	EBL	29	0	40	0	3	A				
90	Princess St / Frontenac St	TWSC	EBT	541	0	40	0	1	A				
90	Princess St / Frontenac St	TWSC	EBR	8	0	40	0	1	A				
90	Princess St / Frontenac St	TWSC	WBL	4	0	0	0	1	A				
90	Princess St / Frontenac St	TWSC	WBT	259	0	0	0	0	A				
90	Princess St / Frontenac St	TWSC	WBR	1	0	0	0	0	A				
100	Princess St / Alfred St	Signalized	NBL	27	20	40	16	22	C	40.0	D	23.6	C
100	Princess St / Alfred St	Signalized	NBT	109	20	40	12	18	B				
100	Princess St / Alfred St	Signalized	NBR	75	20	40	5	11	B				
100	Princess St / Alfred St	Signalized	SBL	32	25	60	16	25	C				
100	Princess St / Alfred St	Signalized	SBT	139	25	60	12	19	B				
100	Princess St / Alfred St	Signalized	SBR	63	25	60	6	12	B				
100	Princess St / Alfred St	Signalized	EBL	12	70	95	32	40	D				
100	Princess St / Alfred St	Signalized	EBT	506	70	95	21	29	C				
100	Princess St / Alfred St	Signalized	EBR	11	70	95	17	26	C				
100	Princess St / Alfred St	Signalized	WBL	9	30	50	22	29	C				
100	Princess St / Alfred St	Signalized	WBT	194	30	50	20	26	C				
100	Princess St / Alfred St	Signalized	WBR	28	30	50	2	6	A				
110	Princess St / Chatham St	TWSC	SBL	0	0	0	0	0	A	12.0	B	1.5	A
110	Princess St / Chatham St	TWSC	SBR	1	0	0	1	12	B				
110	Princess St / Chatham St	TWSC	EBL	15	0	25	0	2	A				
110	Princess St / Chatham St	TWSC	EBT	595	0	25	0	2	A				
110	Princess St / Chatham St	TWSC	WBT	230	0	45	0	0	A				
110	Princess St / Chatham St	TWSC	WBR	4	0	45	0	0	A				
120	Princess St / University Av	Signalized	NBL	38	5	10	17	23	C	25.0	C	5.6	A
120	Princess St / University Av	Signalized	NBR	23	5	10	4	9	A				
120	Princess St / University Av	Signalized	EBT	497	20	70	2	5	A				
120	Princess St / University Av	Signalized	EBR	61	20	70	1	4	A				
120	Princess St / University Av	Signalized	WBL	8	5	20	17	25	C				
120	Princess St / University Av	Signalized	WBT	197	5	20	2	3	A				
130	Princess St / Division St	Signalized	NBL	23	5	20	14	25	C	28.0	C	16.7	B
130	Princess St / Division St	Signalized	NBT	52	5	20	11	17	B				
130	Princess St / Division St	Signalized	NBR	1	5	20	0	0	A				
130	Princess St / Division St	Signalized	SBL	142	5	65	5	7	A				
130	Princess St / Division St	Signalized	SBT	98	5	65	3	4	A				
130	Princess St / Division St	Signalized	SBR	182	5	65	0	0	A				
130	Princess St / Division St	Signalized	EBL	128	30	50	20	28	C				
130	Princess St / Division St	Signalized	EBT	363	30	50	20	28	C				
130	Princess St / Division St	Signalized	EBR	26	30	50	7	14	B				

Williamsville Operational Analysis

2036 No Mitigation - Approved Growth, 35% Auto M.S. - AM Peak

Measures of Effectiveness Details



Node	Location	Control	Mvmt.	Volume (All)	Queue (m)		Stop Delay (s)	Delay (s)	LOS	Critical Mvmt		Intersection	
					50th	95th				Delay	LOS	Delay	LOS
140	Concession St / Drayton Av	TWSC	NBR	36	5	10	27	38	E	38.0	E	7.2	A
140	Concession St / Drayton Av	TWSC	EBT	903	0	125	3	6	A				
140	Concession St / Drayton Av	TWSC	EBR	0	0	125	0	0	A				
150	Concession St / Leroy Grant Dr (S)	TWSC	SBL	1	0	0	8	19	C	19.0	C	6.9	A
150	Concession St / Leroy Grant Dr (S)	TWSC	EBL	41	45	75	1	4	A				
150	Concession St / Leroy Grant Dr (S)	TWSC	EBT	871	45	75	3	7	A				
155	Concession St / Leroy Grant Drive (N)	TWSC	NBL	31	5	10	3	10	A	11.0	B	0.6	A
155	Concession St / Leroy Grant Drive (N)	TWSC	NBT	12	5	10	2	11	B				
155	Concession St / Leroy Grant Drive (N)	TWSC	SBT	1	0	0	0	9	A				
155	Concession St / Leroy Grant Drive (N)	TWSC	SBR	76	0	0	0	0	A				
155	Concession St / Leroy Grant Drive (N)	TWSC	WBT	629	0	0	0	0	A				
155	Concession St / Leroy Grant Drive (N)	TWSC	WBR	26	0	0	0	1	A				
160	Concession St / Macdonnell St	Signalized	NBL	69	5	25	22	27	C	28.0	C	9.6	A
160	Concession St / Macdonnell St	Signalized	NBT	0	5	25	0	0	A				
160	Concession St / Macdonnell St	Signalized	NBR	4	5	25	15	25	C				
160	Concession St / Macdonnell St	Signalized	SBR	45	0	5	1	3	A				
160	Concession St / Macdonnell St	Signalized	EBL	36	75	75	14	22	C				
160	Concession St / Macdonnell St	Signalized	EBT	714	75	75	6	10	A				
160	Concession St / Macdonnell St	Signalized	EBR	124	75	75	4	8	A				
160	Concession St / Macdonnell St	Signalized	WBL	28	20	55	21	28	C				
160	Concession St / Macdonnell St	Signalized	WBT	548	20	55	4	6	A				
160	Concession St / Macdonnell St	Signalized	WBR	0	20	55	0	0	A				
170	Concession St / Connaught St	TWSC	SBL	8	0	5	7	15	B	15.0	B	1.3	A
170	Concession St / Connaught St	TWSC	SBR	8	0	5	2	9	A				
170	Concession St / Connaught St	TWSC	EBL	17	0	95	4	7	A				
170	Concession St / Connaught St	TWSC	EBT	698	0	95	1	2	A				
170	Concession St / Connaught St	TWSC	WBT	568	0	0	0	0	A				
170	Concession St / Connaught St	TWSC	WBR	4	0	0	0	0	A				
180	Concession St / Victoria St	Signalized	NBL	42	10	25	24	30	C	34.0	C	11.8	B
180	Concession St / Victoria St	Signalized	NBT	14	10	25	25	30	C				
180	Concession St / Victoria St	Signalized	NBR	21	10	25	9	15	B				
180	Concession St / Victoria St	Signalized	SBL	7	5	15	29	34	C				
180	Concession St / Victoria St	Signalized	SBT	30	5	15	24	29	C				
180	Concession St / Victoria St	Signalized	SBR	45	5	15	2	9	A				
180	Concession St / Victoria St	Signalized	EBL	20	35	75	9	14	B				
180	Concession St / Victoria St	Signalized	EBT	664	35	75	6	9	A				
180	Concession St / Victoria St	Signalized	EBR	8	35	75	7	11	B				
180	Concession St / Victoria St	Signalized	WBL	48	40	90	16	24	C				
180	Concession St / Victoria St	Signalized	WBT	488	40	90	6	11	B				
180	Concession St / Victoria St	Signalized	WBR	4	40	90	0	1	A				
190	Concession St / Nelson St	TWSC	NBL	6	0	5	14	22	C	22.0	C	1.9	A
190	Concession St / Nelson St	TWSC	NBT	0	0	5	0	0	A				
190	Concession St / Nelson St	TWSC	NBR	5	0	5	1	8	A				
190	Concession St / Nelson St	TWSC	SBL	0	5	5	0	0	A				
190	Concession St / Nelson St	TWSC	SBT	0	5	5	0	0	A				
190	Concession St / Nelson St	TWSC	SBR	25	5	5	0	6	A				
190	Concession St / Nelson St	TWSC	EBL	39	0	75	2	4	A				
190	Concession St / Nelson St	TWSC	EBT	649	0	75	0	2	A				
190	Concession St / Nelson St	TWSC	EBR	0	0	75	0	0	A				
190	Concession St / Nelson St	TWSC	WBL	10	0	35	2	5	A				
190	Concession St / Nelson St	TWSC	WBT	506	0	35	0	1	A				
190	Concession St / Nelson St	TWSC	WBR	0	0	35	0	0	A				

Williamsville Operational Analysis

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Measures of Effectiveness Details



Node	Location	Control	Mvmt.	Volume (All)	Queue (m)		Stop Delay (s)	Delay (s)	LOS	Critical Mvmt		Intersection	
					50th	95th				Delay	LOS	Delay	LOS
200	Concession St / Kingscourt Av	TWSC	SBL	43	5	15	19	29	D	29.0	D	2.7	A
200	Concession St / Kingscourt Av	TWSC	SBR	4	5	15	6	20	C				
200	Concession St / Kingscourt Av	TWSC	EBL	24	0	80	2	5	A				
200	Concession St / Kingscourt Av	TWSC	EBT	630	0	80	1	3	A				
200	Concession St / Kingscourt Av	TWSC	WBT	510	0	0	0	0	A				
200	Concession St / Kingscourt Av	TWSC	WBR	20	0	0	0	0	A				
210	Concession St / Fergus St	TWSC	SBL	43	5	20	37	49	E	49.0	E	4.4	A
210	Concession St / Fergus St	TWSC	SBR	1	5	20	1	10	A				
210	Concession St / Fergus St	TWSC	EBL	21	0	100	3	7	A				
210	Concession St / Fergus St	TWSC	EBT	649	0	100	2	5	A				
210	Concession St / Fergus St	TWSC	WBT	527	0	0	0	0	A				
210	Concession St / Fergus St	TWSC	WBR	20	0	0	0	0	A				
220	Concession St / Grey St	TWSC	SBL	29	5	30	100	115	F	115.0	F	9.9	A
220	Concession St / Grey St	TWSC	SBR	14	5	30	60	70	F				
220	Concession St / Grey St	TWSC	EBL	21	35	105	10	17	C				
220	Concession St / Grey St	TWSC	EBT	674	35	105	7	12	B				
220	Concession St / Grey St	TWSC	WBT	531	0	0	0	0	A				
220	Concession St / Grey St	TWSC	WBR	21	0	0	0	0	A				
230	Concession St / Alfred St	Signalized	NBL	114	20	35	17	25	C	26.0	C	13.0	B
230	Concession St / Alfred St	Signalized	NBT	10	20	35	19	26	C				
230	Concession St / Alfred St	Signalized	NBR	52	20	35	11	18	B				
230	Concession St / Alfred St	Signalized	SBL	2	5	20	14	22	C				
230	Concession St / Alfred St	Signalized	SBT	32	5	20	13	17	B				
230	Concession St / Alfred St	Signalized	SBR	34	5	20	4	9	A				
230	Concession St / Alfred St	Signalized	EBL	34	55	60	14	20	B				
230	Concession St / Alfred St	Signalized	EBT	504	55	60	8	12	B				
230	Concession St / Alfred St	Signalized	EBR	163	55	60	1	3	A				
230	Concession St / Alfred St	Signalized	WBL	33	40	85	10	17	B				
230	Concession St / Alfred St	Signalized	WBT	404	40	85	8	13	B				
230	Concession St / Alfred St	Signalized	WBR	0	40	85	0	0	A				
240	Concession St / Lansdowne St	TWSC	NBL	0	0	0	0	0	A	7.0	A	1.1	A
240	Concession St / Lansdowne St	TWSC	NBR	0	0	0	0	0	A				
240	Concession St / Lansdowne St	TWSC	EBT	558	0	15	0	1	A				
240	Concession St / Lansdowne St	TWSC	EBR	0	0	15	0	0	A				
240	Concession St / Lansdowne St	TWSC	WBL	12	0	10	4	7	A				
240	Concession St / Lansdowne St	TWSC	WBT	440	0	10	0	1	A				
250	Concession St / Division St	Signalized	NBL	15	25	50	22	31	C	35.0	C	20.4	C
250	Concession St / Division St	Signalized	NBT	214	25	50	15	20	B				
250	Concession St / Division St	Signalized	NBR	10	25	50	10	16	B				
250	Concession St / Division St	Signalized	SBL	31	50	105	18	26	C				
250	Concession St / Division St	Signalized	SBT	367	50	105	16	22	C				
250	Concession St / Division St	Signalized	SBR	202	50	105	2	6	A				
250	Concession St / Division St	Signalized	EBL	193	35	110	13	19	B				
250	Concession St / Division St	Signalized	EBT	359	35	110	12	17	B				
250	Concession St / Division St	Signalized	EBR	13	35	110	6	8	A				
250	Concession St / Division St	Signalized	WBL	19	40	70	27	35	C				
250	Concession St / Division St	Signalized	WBT	233	40	70	28	35	C				
250	Concession St / Division St	Signalized	WBR	17	40	70	21	28	C				



Williamsville Operational Analysis

2036 No Mitigation - Approved Growth, 35% Auto M.S. - AM Peak

Measures of Effectiveness Details



Node	Location	Control	Mvmt.	Volume (All)	Queue (m)		Stop Delay (s)	Delay (s)	LOS	Critical Mvmt		Intersection	
					50th	95th				Delay	LOS	Delay	LOS
260	Adelaide St / Division St	TWSC	NBL	19	0	20	2	3	A	8.0	A	0.2	A
260	Adelaide St / Division St	TWSC	NBT	232	0	20	0	0	A				
260	Adelaide St / Division St	TWSC	NBR	0	0	20	0	0	A				
260	Adelaide St / Division St	TWSC	SBL	14	0	30	0	1	A				
260	Adelaide St / Division St	TWSC	SBT	375	0	30	0	0	A				
260	Adelaide St / Division St	TWSC	SBR	9	0	30	0	0	A				
260	Adelaide St / Division St	TWSC	EBL	0	0	5	0	0	A				
260	Adelaide St / Division St	TWSC	EBT	0	0	5	0	0	A				
260	Adelaide St / Division St	TWSC	EBR	2	0	5	0	0	A				
260	Adelaide St / Division St	TWSC	WBL	0	0	5	0	0	A				
260	Adelaide St / Division St	TWSC	WBT	2	0	5	0	8	A				
260	Adelaide St / Division St	TWSC	WBR	5	0	5	0	8	A				
270	Stanley St / Division St	TWSC	NBL	16	0	0	1	3	A	10.0	A	1.8	A
270	Stanley St / Division St	TWSC	NBT	245	0	0	0	0	A				
270	Stanley St / Division St	TWSC	SBT	373	0	20	1	2	A				
270	Stanley St / Division St	TWSC	SBR	1	0	20	0	0	A				
270	Stanley St / Division St	TWSC	EBL	8	5	5	3	10	A				
270	Stanley St / Division St	TWSC	EBR	36	5	5	2	10	A				
280	Pine St / Division St	Signalized	NBL	9	10	30	10	17	B	29.0	C	8.3	A
280	Pine St / Division St	Signalized	NBT	203	10	30	3	5	A				
280	Pine St / Division St	Signalized	NBR	4	10	30	3	4	A				
280	Pine St / Division St	Signalized	SBL	33	25	70	4	8	A				
280	Pine St / Division St	Signalized	SBT	378	25	70	4	7	A				
280	Pine St / Division St	Signalized	SBR	0	25	70	0	0	A				
280	Pine St / Division St	Signalized	EBL	0	5	15	0	0	A				
280	Pine St / Division St	Signalized	EBT	31	5	15	24	29	C				
280	Pine St / Division St	Signalized	EBR	13	5	15	5	11	B				
280	Pine St / Division St	Signalized	WBL	18	5	20	20	26	C				
280	Pine St / Division St	Signalized	WBT	5	5	20	17	23	C				
280	Pine St / Division St	Signalized	WBR	57	5	20	4	9	A				
290	Quebec St / Division St	TWSC	NBT	218	0	0	0	0	A	9.0	A	0.9	A
290	Quebec St / Division St	TWSC	NBR	3	0	0	0	0	A				
290	Quebec St / Division St	TWSC	SBL	4	0	50	0	3	A				
290	Quebec St / Division St	TWSC	SBT	406	0	50	0	1	A				
290	Quebec St / Division St	TWSC	WBL	17	0	5	1	9	A				
290	Quebec St / Division St	TWSC	WBR	1	0	5	0	6	A				
300	York St / Division St	Signalized	NBL	0	20	35	0	0	A	30.0	C	7.4	A
300	York St / Division St	Signalized	NBT	191	20	35	3	5	A				
300	York St / Division St	Signalized	NBR	10	20	35	2	4	A				
300	York St / Division St	Signalized	SBL	38	10	35	5	8	A				
300	York St / Division St	Signalized	SBT	387	10	35	2	4	A				
300	York St / Division St	Signalized	SBR	0	10	35	0	0	A				
300	York St / Division St	Signalized	EBL	0	5	20	0	0	A				
300	York St / Division St	Signalized	EBT	47	5	20	23	27	C				
300	York St / Division St	Signalized	EBR	7	5	20	13	19	B				
300	York St / Division St	Signalized	WBL	9	5	20	22	27	C				
300	York St / Division St	Signalized	WBT	23	5	20	22	30	C				
300	York St / Division St	Signalized	WBR	27	5	20	4	11	B				
310	Main St / Division St	TWSC	NBT	197	0	10	1	2	A	8.0	A	0.8	A
310	Main St / Division St	TWSC	NBR	0	0	10	0	0	A				
310	Main St / Division St	TWSC	SBL	15	35	35	0	2	A				
310	Main St / Division St	TWSC	SBT	388	35	35	0	0	A				
310	Main St / Division St	TWSC	WBL	0	0	5	0	0	A				
310	Main St / Division St	TWSC	WBR	5	0	5	0	8	A				
320	Hamilton St / Division St	TWSC	NBL	0	0	0	0	0	A	8.0	A	0.1	A
320	Hamilton St / Division St	TWSC	NBT	192	0	0	0	0	A				
320	Hamilton St / Division St	TWSC	SBT	383	0	0	0	0	A				
320	Hamilton St / Division St	TWSC	SBR	6	0	0	0	0	A				
320	Hamilton St / Division St	TWSC	EBL	6	0	5	1	8	A				
320	Hamilton St / Division St	TWSC	EBR	5	0	5	1	7	A				



Williamsville Operational Analysis

2036 No Mitigation - Approved Growth, 35% Auto M.S. - AM Peak

Measures of Effectiveness Details

Node	Location	Control	Mvmt.	Volume (All)	Queue (m)		Stop Delay (s)	Delay (s)	LOS	Critical Mvmt		Intersection	
					50th	95th				Delay	LOS	Delay	LOS
330	Raglan St / Division St	TWSC	NBT	186	0	0	0	0	A	11.0	B	0.8	A
330	Raglan St / Division St	TWSC	NBR	9	0	0	0	0	A				
330	Raglan St / Division St	TWSC	SBL	17	0	15	0	2	A				
330	Raglan St / Division St	TWSC	SBT	371	0	15	0	1	A				
330	Raglan St / Division St	TWSC	WBL	2	0	5	3	11	B				
330	Raglan St / Division St	TWSC	WBR	5	0	5	0	7	A				
340	Elm St / Division St	TWSC	NBL	2	0	0	0	1	A	7.0	A	0.1	A
340	Elm St / Division St	TWSC	NBT	189	0	0	0	0	A				
340	Elm St / Division St	TWSC	SBT	371	0	0	0	0	A				
340	Elm St / Division St	TWSC	SBR	2	0	0	0	0	A				
340	Elm St / Division St	TWSC	EBL	6	0	5	1	7	A				
340	Elm St / Division St	TWSC	EBR	1	0	5	0	6	A				
350	Ellice St / Division St	TWSC	NBT	183	0	0	0	0	A	9.0	A	0.2	A
350	Ellice St / Division St	TWSC	NBR	8	0	0	0	0	A				
350	Ellice St / Division St	TWSC	SBL	8	0	0	0	1	A				
350	Ellice St / Division St	TWSC	SBT	366	0	0	0	0	A				
350	Ellice St / Division St	TWSC	WBL	4	0	5	1	9	A				
350	Ellice St / Division St	TWSC	WBR	7	0	5	0	7	A				
360	Colborne St / Division St	TWSC	NBL	0	0	20	0	0	A	10.0	A	1.1	A
360	Colborne St / Division St	TWSC	NBT	178	0	20	0	0	A				
360	Colborne St / Division St	TWSC	NBR	0	0	20	0	0	A				
360	Colborne St / Division St	TWSC	SBL	11	0	15	1	2	A				
360	Colborne St / Division St	TWSC	SBT	359	0	15	1	1	A				
360	Colborne St / Division St	TWSC	SBR	0	0	15	0	0	A				
360	Colborne St / Division St	TWSC	EBL	10	5	10	2	9	A				
360	Colborne St / Division St	TWSC	EBT	3	5	10	1	9	A				
360	Colborne St / Division St	TWSC	EBR	3	5	10	1	10	A				
360	Colborne St / Division St	TWSC	WBL	4	0	5	1	10	A				
360	Colborne St / Division St	TWSC	WBT	4	0	5	0	9	A				
360	Colborne St / Division St	TWSC	WBR	4	0	5	0	7	A				
370	Queen St / Division St	Signalized	NBT	57	10	25	7	9	A	21.0	C	14.8	B
370	Queen St / Division St	Signalized	NBR	123	10	25	1	10	A				
370	Queen St / Division St	Signalized	SBL	115	45	75	13	21	C				
370	Queen St / Division St	Signalized	SBT	249	45	75	14	20	B				
370	Queen St / Division St	Signalized	WBL	174	20	30	10	16	B				
370	Queen St / Division St	Signalized	WBR	119	20	30	0	4	A				



Williamsville Operational Analysis

2036 No Mitigation - Approved Growth, 35% Auto M.S. - PM Peak

Measures of Effectiveness Details

ID	Intersection Name	Control Type	Number of Vehicles	50th %ile Queue (m)	95th %ile Queue (m)	Avg. Vehicle Delay (sec)	Avg. Stop Delay (sec)	LOS
10	Princess St / Concession St	Signalized	3,351	53.9	94.3	32.0	26.2	C
20	Princess St / Regent St	TWSC	1,432	0.1	45.7	2.4	0.2	-
30	Princess St / Drayton Av	TWSC	1,359	3.4	42.6	2.6	0.6	-
40	Princess St / Macdonnell Av	Signalized	1,358	76.7	160.8	19.2	13.7	B
50	Princess St / Smith St	TWSC	1,105	35.6	70.7	5.2	2.8	-
60	Princess St / Victoria St	Signalized	1,373	28.8	74.8	10.7	5.8	B
70	Princess St / Nelson St	TWSC	1,308	10.6	115.5	5.5	2.5	-
80	Princess St / Albert St	Signalized	1,216	31.3	67.3	16.2	10.7	B
90	Princess St / Frontenac St	TWSC	1,068	2.3	39.4	2.6	0.7	-
100	Princess St / Alfred St	Signalized	1,431	56.9	87.1	25.9	18.6	C
110	Princess St / Chatham St	TWSC	1,174	12.5	87.9	5.4	2.6	-
120	Princess St / University Av	Signalized	1,111	25.2	51.3	7.5	4.3	A
130	Princess St / Division St	Signalized	1,469	29.3	57.0	13.5	9.1	B
140	Concession St / Drayton Av	TWSC	1,170	196.9	316.4	56.8	37.7	-
150	Concession St / Leroy Grant Dr (S)	TWSC	1,195	73.7	73.9	37.0	22.4	-
155	Concession St / Leroy Grant Drive (N)	TWSC	1,191	2.9	7.4	3.9	1.6	-
160	Concession St / Macdonnell St	Signalized	2,109	72.8	76.9	17.7	12.7	B
170	Concession St / Connaught St	TWSC	1,761	53.8	103.9	8.1	5.0	-
180	Concession St / Victoria St	Signalized	1,882	92.4	103.1	18.5	12.9	B
190	Concession St / Nelson St	TWSC	1,690	14.3	77.1	6.5	4.3	-
200	Concession St / Kingscourt Av	TWSC	1,621	0.0	94.2	6.7	3.6	-
210	Concession St / Fergus St	TWSC	1,616	0.0	99.3	6.4	3.8	-
220	Concession St / Grey St	TWSC	1,629	15.2	82.3	8.1	5.5	-
230	Concession St / Alfred St	Signalized	1,811	59.9	92.8	19.8	12.8	B
240	Concession St / Lansdowne St	TWSC	1,127	0.0	32.9	1.6	0.6	-
250	Concession St / Division St	Signalized	2,173	80.7	155.4	32.0	24.7	C
260	Adelaide St / Division St	TWSC	1,106	0.0	67.6	2.7	1.2	-
270	Stanley St / Division St	TWSC	1,091	0.3	12.2	2.3	0.6	-
280	Pine St / Division St	Signalized	1,163	22.2	66.0	9.8	6.2	A
290	Quebec St / Division St	TWSC	997	0.0	58.0	1.2	0.1	-
300	York St / Division St	Signalized	1,110	21.7	37.1	6.6	4.3	A
310	Main St / Division St	TWSC	964	26.6	48.5	3.3	1.7	-
320	Hamilton St / Division St	TWSC	976	0.0	13.8	1.2	0.0	-
330	Raglan St / Division St	TWSC	993	0.2	0.2	0.4	0.1	-
340	Elm St / Division St	TWSC	1,048	0.0	25.2	0.9	0.1	-
350	Ellice St / Division St	TWSC	1,007	0.0	25.7	0.6	0.0	-
360	Colborne St / Division St	TWSC	996	0.0	28.0	1.5	0.5	-
370	Queen St / Division St	Signalized	1,514	43.4	83.1	17.5	9.7	B
<b>Total</b>			<b>52,695</b>	<b>1,144</b>	<b>2,775</b>	<b>420</b>	<b>270</b>	

Williamsville Operational Analysis

2036 No Mitigation - Approved Growth, 35% Auto M.S. - PM Peak

Measures of Effectiveness Details



Node	Location	Control	Mvmt.	Volume (All)	Queue (m)		Stop Delay (s)	Delay (s)	LOS	Critical Mvmt		Intersection	
					50th	95th				Delay	LOS	Delay	LOS
10	Princess St / Concession St	Signalized	NBL	305	45	105	34	41	D	50.0	D	32.0	C
10	Princess St / Concession St	Signalized	NBT	294	45	105	33	40	D				
10	Princess St / Concession St	Signalized	NBR	0	45	105	0	0	A				
10	Princess St / Concession St	Signalized	SBL	621	85	145	41	50	D				
10	Princess St / Concession St	Signalized	SBT	486	85	145	39	48	D				
10	Princess St / Concession St	Signalized	SBR	0	85	145	0	0	A				
10	Princess St / Concession St	Signalized	EBT	329	30	50	33	40	D				
10	Princess St / Concession St	Signalized	EBR	279	30	50	0	2	A				
10	Princess St / Concession St	Signalized	WBT	388	40	60	32	38	D				
10	Princess St / Concession St	Signalized	WBR	627	40	60	0	0	A				
10	Princess St / Concession St	Signalized	WBL	22	40	60	6	10	A				
20	Princess St / Regent St	TWSC	NBL	0	5	10	0	0	A	12.0	B	2.4	A
20	Princess St / Regent St	TWSC	NBR	33	5	10	3	12	B				
20	Princess St / Regent St	TWSC	EBT	683	0	65	0	3	A				
20	Princess St / Regent St	TWSC	EBR	72	0	65	0	1	A				
20	Princess St / Regent St	TWSC	WBL	34	0	25	6	8	A				
20	Princess St / Regent St	TWSC	WBT	610	0	25	0	1	A				
30	Princess St / Drayton Av	TWSC	SBL	4	45	50	22	44	E	44.0	E	2.6	A
30	Princess St / Drayton Av	TWSC	SBR	100	45	50	6	19	C				
30	Princess St / Drayton Av	TWSC	EBL	31	0	55	4	6	A				
30	Princess St / Drayton Av	TWSC	EBT	681	0	55	0	1	A				
30	Princess St / Drayton Av	TWSC	WBT	543	0	25	0	1	A				
30	Princess St / Drayton Av	TWSC	WBR	0	0	25	0	0	A				
40	Princess St / Macdonnell Av	Signalized	NBL	25	10	25	13	19	B	32.0	C	19.2	B
40	Princess St / Macdonnell Av	Signalized	NBT	86	10	25	12	17	B				
40	Princess St / Macdonnell Av	Signalized	NBR	9	10	25	7	14	B				
40	Princess St / Macdonnell Av	Signalized	SBL	0	10	40	0	0	A				
40	Princess St / Macdonnell Av	Signalized	SBT	38	10	40	14	21	C				
40	Princess St / Macdonnell Av	Signalized	SBR	32	10	40	4	12	B				
40	Princess St / Macdonnell Av	Signalized	EBL	30	115	275	24	31	C				
40	Princess St / Macdonnell Av	Signalized	EBT	606	115	275	16	23	C				
40	Princess St / Macdonnell Av	Signalized	EBR	38	115	275	15	22	C				
40	Princess St / Macdonnell Av	Signalized	WBL	10	50	55	24	32	C				
40	Princess St / Macdonnell Av	Signalized	WBT	484	50	55	11	14	B				
40	Princess St / Macdonnell Av	Signalized	WBR	0	50	55	0	0	A				
50	Princess St / Smith St	TWSC	SBL	3	40	40	5	14	B	27.0	D	5.2	A
50	Princess St / Smith St	TWSC	SBR	10	40	40	15	27	D				
50	Princess St / Smith St	TWSC	EBL	14	40	60	2	4	A				
50	Princess St / Smith St	TWSC	EBT	595	40	60	0	1	A				
50	Princess St / Smith St	TWSC	WBT	483	30	85	6	10	A				
50	Princess St / Smith St	TWSC	WBR	0	30	85	0	0	A				
60	Princess St / Victoria St	Signalized	NBL	16	20	45	19	28	C	30.0	C	10.7	B
60	Princess St / Victoria St	Signalized	NBT	41	20	45	17	23	C				
60	Princess St / Victoria St	Signalized	NBR	100	20	45	9	17	B				
60	Princess St / Victoria St	Signalized	SBL	12	5	20	22	30	C				
60	Princess St / Victoria St	Signalized	SBT	46	5	20	17	23	C				
60	Princess St / Victoria St	Signalized	SBR	15	5	20	0	3	A				
60	Princess St / Victoria St	Signalized	EBL	9	15	80	12	18	B				
60	Princess St / Victoria St	Signalized	EBT	562	15	80	1	5	A				
60	Princess St / Victoria St	Signalized	EBR	33	15	80	1	5	A				
60	Princess St / Victoria St	Signalized	WBL	14	50	85	19	25	C				
60	Princess St / Victoria St	Signalized	WBT	462	50	85	8	13	B				
60	Princess St / Victoria St	Signalized	WBR	63	50	85	6	11	B				
70	Princess St / Nelson St	TWSC	NBL	15	0	40	18	29	D	29.0	D	5.5	A
70	Princess St / Nelson St	TWSC	NBT	3	0	40	15	29	D				
70	Princess St / Nelson St	TWSC	NBR	0	0	40	0	0	A				
70	Princess St / Nelson St	TWSC	SBL	0	0	0	0	0	A				
70	Princess St / Nelson St	TWSC	SBT	0	0	0	0	0	A				
70	Princess St / Nelson St	TWSC	SBR	0	0	0	0	0	A				
70	Princess St / Nelson St	TWSC	EBL	188	20	105	4	9	A				
70	Princess St / Nelson St	TWSC	EBT	499	20	105	2	6	A				
70	Princess St / Nelson St	TWSC	EBR	6	20	105	1	4	A				
70	Princess St / Nelson St	TWSC	WBL	39	0	130	4	8	A				
70	Princess St / Nelson St	TWSC	WBT	544	0	130	2	3	A				
70	Princess St / Nelson St	TWSC	WBR	14	0	130	1	3	A				

Williamsville Operational Analysis

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Measures of Effectiveness Details



Node	Location	Control	Mvmt.	Volume (All)	Queue (m)		Stop Delay (s)	Delay (s)	LOS	Critical Mvmt		Intersection	
					50th	95th				Delay	LOS	Delay	LOS
80	Princess St / Albert St	Signalized	NBL	47	10	20	13	19	B	32.0	C	16.2	B
80	Princess St / Albert St	Signalized	NBT	12	10	20	11	16	B				
80	Princess St / Albert St	Signalized	NBR	42	10	20	3	8	A				
80	Princess St / Albert St	Signalized	SBL	0	5	15	0	0	A				
80	Princess St / Albert St	Signalized	SBT	26	5	15	16	20	B				
80	Princess St / Albert St	Signalized	SBR	34	5	15	1	6	A				
80	Princess St / Albert St	Signalized	EBL	49	40	80	23	32	C				
80	Princess St / Albert St	Signalized	EBT	452	40	80	12	18	B				
80	Princess St / Albert St	Signalized	EBR	10	40	80	10	15	B				
80	Princess St / Albert St	Signalized	WBL	8	30	70	16	21	C				
80	Princess St / Albert St	Signalized	WBT	521	30	70	9	14	B				
80	Princess St / Albert St	Signalized	WBR	15	30	70	13	19	B				
90	Princess St / Frontenac St	TWSC	NBL	4	0	5	7	13	B	13.0	B	2.6	A
90	Princess St / Frontenac St	TWSC	NBT	8	0	5	4	13	B				
90	Princess St / Frontenac St	TWSC	NBR	0	0	5	0	0	A				
90	Princess St / Frontenac St	TWSC	SBL	0	0	0	0	0	A				
90	Princess St / Frontenac St	TWSC	SBT	0	0	0	0	0	A				
90	Princess St / Frontenac St	TWSC	SBR	0	0	0	0	0	A				
90	Princess St / Frontenac St	TWSC	EBL	56	5	85	4	8	A				
90	Princess St / Frontenac St	TWSC	EBT	438	5	85	1	5	A				
90	Princess St / Frontenac St	TWSC	EBR	0	5	85	0	0	A				
90	Princess St / Frontenac St	TWSC	WBL	0	0	0	0	0	A				
90	Princess St / Frontenac St	TWSC	WBT	544	0	0	0	0	A				
90	Princess St / Frontenac St	TWSC	WBR	18	0	0	0	0	A				
100	Princess St / Alfred St	Signalized	NBL	48	25	55	14	23	C	51.0	D	25.9	C
100	Princess St / Alfred St	Signalized	NBT	120	25	55	16	23	C				
100	Princess St / Alfred St	Signalized	NBR	113	25	55	8	14	B				
100	Princess St / Alfred St	Signalized	SBL	70	15	30	17	25	C				
100	Princess St / Alfred St	Signalized	SBT	51	15	30	16	25	C				
100	Princess St / Alfred St	Signalized	SBR	11	15	30	8	15	B				
100	Princess St / Alfred St	Signalized	EBL	18	60	120	41	51	D				
100	Princess St / Alfred St	Signalized	EBT	419	60	120	20	29	C				
100	Princess St / Alfred St	Signalized	EBR	15	60	120	20	28	C				
100	Princess St / Alfred St	Signalized	WBL	37	80	90	12	18	B				
100	Princess St / Alfred St	Signalized	WBT	498	80	90	22	28	C				
100	Princess St / Alfred St	Signalized	WBR	31	80	90	7	11	B				
110	Princess St / Chatham St	TWSC	SBL	0	0	5	0	0	A	19.0	C	5.4	A
110	Princess St / Chatham St	TWSC	SBR	2	0	5	3	19	C				
110	Princess St / Chatham St	TWSC	EBL	111	15	110	4	10	A				
110	Princess St / Chatham St	TWSC	EBT	488	15	110	3	7	A				
110	Princess St / Chatham St	TWSC	WBT	564	10	65	2	3	A				
110	Princess St / Chatham St	TWSC	WBR	9	10	65	2	3	A				
120	Princess St / University Av	Signalized	NBL	71	10	20	14	20	B	20.0	B	7.5	A
120	Princess St / University Av	Signalized	NBR	25	10	20	2	8	A				
120	Princess St / University Av	Signalized	EBT	434	45	70	5	9	A				
120	Princess St / University Av	Signalized	EBR	49	45	70	5	9	A				
120	Princess St / University Av	Signalized	WBL	30	10	40	9	13	B				
120	Princess St / University Av	Signalized	WBT	502	10	40	2	4	A				
130	Princess St / Division St	Signalized	NBL	86	20	40	14	24	C	26.0	C	13.5	B
130	Princess St / Division St	Signalized	NBT	156	20	40	13	19	B				
130	Princess St / Division St	Signalized	NBR	10	20	40	7	11	B				
130	Princess St / Division St	Signalized	SBL	204	35	70	7	11	B				
130	Princess St / Division St	Signalized	SBT	105	35	70	4	5	A				
130	Princess St / Division St	Signalized	SBR	445	35	70	0	1	A				
130	Princess St / Division St	Signalized	EBL	130	25	45	17	25	C				
130	Princess St / Division St	Signalized	EBT	301	25	45	19	26	C				
130	Princess St / Division St	Signalized	EBR	32	25	45	7	14	B				

Williamsville Operational Analysis

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Measures of Effectiveness Details



Node	Location	Control	Mvmt.	Volume (All)	Queue (m)		Stop Delay (s)	Delay (s)	LOS	Critical Mvmt		Intersection	
					50th	95th				Delay	LOS	Delay	LOS
140	Concession St / Drayton Av	TWSC	NBR	21	30	120	832	858	F	858.0	F	56.8	F
140	Concession St / Drayton Av	TWSC	EBT	1,110	200	320	23	42	E				
140	Concession St / Drayton Av	TWSC	EBR	39	200	320	28	48	E				
150	Concession St / Leroy Grant Dr (S)	TWSC	SBL	20	0	10	19	32	D	49.0	E	37.0	E
150	Concession St / Leroy Grant Dr (S)	TWSC	EBL	177	75	75	36	49	E				
150	Concession St / Leroy Grant Dr (S)	TWSC	EBT	998	75	75	20	35	D				
155	Concession St / Leroy Grant Drive (N)	TWSC	NBL	85	20	50	10	24	C	25.0	C	3.9	A
155	Concession St / Leroy Grant Drive (N)	TWSC	NBT	89	20	50	10	25	C				
155	Concession St / Leroy Grant Drive (N)	TWSC	SBT	20	0	5	9	18	C				
155	Concession St / Leroy Grant Drive (N)	TWSC	SBR	8	0	5	0	0	A				
155	Concession St / Leroy Grant Drive (N)	TWSC	WBT	950	0	0	0	0	A				
155	Concession St / Leroy Grant Drive (N)	TWSC	WBR	39	0	0	0	1	A				
160	Concession St / Macdonnell St	Signalized	NBL	97	20	40	23	29	C	84.0	F	17.7	B
160	Concession St / Macdonnell St	Signalized	NBT	25	20	40	21	30	C				
160	Concession St / Macdonnell St	Signalized	NBR	34	20	40	17	24	C				
160	Concession St / Macdonnell St	Signalized	SBR	67	5	10	6	10	A				
160	Concession St / Macdonnell St	Signalized	EBL	58	75	80	51	61	E				
160	Concession St / Macdonnell St	Signalized	EBT	865	75	80	9	14	B				
160	Concession St / Macdonnell St	Signalized	EBR	94	75	80	8	12	B				
160	Concession St / Macdonnell St	Signalized	WBL	48	85	85	71	84	F				
160	Concession St / Macdonnell St	Signalized	WBT	821	85	85	10	14	B				
160	Concession St / Macdonnell St	Signalized	WBR	0	85	85	0	0	A				
170	Concession St / Connaught St	TWSC	SBL	0	0	5	0	0	A	27.0	D	8.1	A
170	Concession St / Connaught St	TWSC	SBR	16	0	5	16	27	D				
170	Concession St / Connaught St	TWSC	EBL	0	25	95	0	0	A				
170	Concession St / Connaught St	TWSC	EBT	893	25	95	2	5	A				
170	Concession St / Connaught St	TWSC	WBT	852	85	115	8	11	B				
170	Concession St / Connaught St	TWSC	WBR	0	85	115	0	0	A				
180	Concession St / Victoria St	Signalized	NBL	41	10	115	68	82	F	82.0	F	18.5	B
180	Concession St / Victoria St	Signalized	NBT	48	10	115	50	61	E				
180	Concession St / Victoria St	Signalized	NBR	19	10	115	42	51	D				
180	Concession St / Victoria St	Signalized	SBL	0	0	10	0	0	A				
180	Concession St / Victoria St	Signalized	SBT	22	0	10	19	24	C				
180	Concession St / Victoria St	Signalized	SBR	35	0	10	12	21	C				
180	Concession St / Victoria St	Signalized	EBL	30	115	115	19	26	C				
180	Concession St / Victoria St	Signalized	EBT	801	115	115	8	13	B				
180	Concession St / Victoria St	Signalized	EBR	67	115	115	9	15	B				
180	Concession St / Victoria St	Signalized	WBL	25	85	95	22	30	C				
180	Concession St / Victoria St	Signalized	WBT	781	85	95	12	17	B				
180	Concession St / Victoria St	Signalized	WBR	13	85	95	0	1	A				
190	Concession St / Nelson St	TWSC	NBL	7	0	5	64	77	F	77.0	F	6.5	A
190	Concession St / Nelson St	TWSC	NBT	0	0	5	0	0	A				
190	Concession St / Nelson St	TWSC	NBR	43	0	5	9	16	C				
190	Concession St / Nelson St	TWSC	SBL	0	0	5	0	0	A				
190	Concession St / Nelson St	TWSC	SBT	0	0	5	0	0	A				
190	Concession St / Nelson St	TWSC	SBR	12	0	5	0	6	A				
190	Concession St / Nelson St	TWSC	EBL	0	0	65	0	0	A				
190	Concession St / Nelson St	TWSC	EBT	775	0	65	1	1	A				
190	Concession St / Nelson St	TWSC	EBR	50	0	65	0	1	A				
190	Concession St / Nelson St	TWSC	WBL	7	30	95	8	12	B				
190	Concession St / Nelson St	TWSC	WBT	796	30	95	7	11	B				
190	Concession St / Nelson St	TWSC	WBR	0	30	95	0	0	A				

Williamsville Operational Analysis

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Measures of Effectiveness Details



Node	Location	Control	Mvmt.	Volume (All)	Queue (m)		Stop Delay (s)	Delay (s)	LOS	Critical Mvmt		Intersection	
					50th	95th				Delay	LOS	Delay	LOS
200	Concession St / Kingscourt Av	TWSC	SBL	0	0	15	0	0	A	27.0	D	6.7	A
200	Concession St / Kingscourt Av	TWSC	SBR	17	0	15	16	27	D				
200	Concession St / Kingscourt Av	TWSC	EBL	2	0	95	2	10	A				
200	Concession St / Kingscourt Av	TWSC	EBT	815	0	95	2	5	A				
200	Concession St / Kingscourt Av	TWSC	WBT	787	0	95	5	8	A				
200	Concession St / Kingscourt Av	TWSC	WBR	0	0	95	0	0	A				
210	Concession St / Fergus St	TWSC	SBL	12	0	5	49	59	F	59.0	F	6.4	A
210	Concession St / Fergus St	TWSC	SBR	0	0	5	0	0	A				
210	Concession St / Fergus St	TWSC	EBL	0	0	100	0	0	A				
210	Concession St / Fergus St	TWSC	EBT	814	0	100	4	7	A				
210	Concession St / Fergus St	TWSC	WBT	786	0	100	3	5	A				
210	Concession St / Fergus St	TWSC	WBR	4	0	100	0	0	A				
220	Concession St / Grey St	TWSC	SBL	6	0	5	91	101	F	101.0	F	8.1	A
220	Concession St / Grey St	TWSC	SBR	10	0	5	14	22	C				
220	Concession St / Grey St	TWSC	EBL	0	30	105	0	0	A				
220	Concession St / Grey St	TWSC	EBT	826	30	105	9	14	B				
220	Concession St / Grey St	TWSC	WBT	783	0	60	1	1	A				
220	Concession St / Grey St	TWSC	WBR	4	0	60	0	0	A				
230	Concession St / Alfred St	Signalized	NBL	182	35	95	21	32	C	32.0	C	19.8	B
230	Concession St / Alfred St	Signalized	NBT	30	35	95	22	30	C				
230	Concession St / Alfred St	Signalized	NBR	32	35	95	16	26	C				
230	Concession St / Alfred St	Signalized	SBL	1	5	15	0	0	A				
230	Concession St / Alfred St	Signalized	SBT	35	5	15	18	23	C				
230	Concession St / Alfred St	Signalized	SBR	24	5	15	6	12	B				
230	Concession St / Alfred St	Signalized	EBL	27	55	60	21	27	C				
230	Concession St / Alfred St	Signalized	EBT	468	55	60	12	16	B				
230	Concession St / Alfred St	Signalized	EBR	342	55	60	2	5	A				
230	Concession St / Alfred St	Signalized	WBL	88	80	140	14	24	C				
230	Concession St / Alfred St	Signalized	WBT	582	80	140	16	26	C				
230	Concession St / Alfred St	Signalized	WBR	0	80	140	0	0	A				
240	Concession St / Lansdowne St	TWSC	NBL	0	0	0	0	0	A	4.0	A	1.6	A
240	Concession St / Lansdowne St	TWSC	NBR	0	0	0	0	0	A				
240	Concession St / Lansdowne St	TWSC	EBT	453	0	0	0	1	A				
240	Concession St / Lansdowne St	TWSC	EBR	0	0	0	0	0	A				
240	Concession St / Lansdowne St	TWSC	WBL	29	0	55	1	4	A				
240	Concession St / Lansdowne St	TWSC	WBT	645	0	55	1	2	A				
250	Concession St / Division St	Signalized	NBL	40	85	110	21	30	C	69.0	E	32.0	C
250	Concession St / Division St	Signalized	NBT	550	85	110	19	26	C				
250	Concession St / Division St	Signalized	NBR	10	85	110	17	23	C				
250	Concession St / Division St	Signalized	SBL	27	70	210	31	41	D				
250	Concession St / Division St	Signalized	SBT	452	70	210	19	25	C				
250	Concession St / Division St	Signalized	SBR	207	70	210	5	10	A				
250	Concession St / Division St	Signalized	EBL	198	30	75	18	24	C				
250	Concession St / Division St	Signalized	EBT	199	30	75	13	17	B				
250	Concession St / Division St	Signalized	EBR	37	30	75	3	6	A				
250	Concession St / Division St	Signalized	WBL	11	140	210	55	67	E				
250	Concession St / Division St	Signalized	WBT	410	140	210	57	69	E				
250	Concession St / Division St	Signalized	WBR	32	140	210	49	60	E				



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Measures of Effectiveness Details



Node	Location	Control	Mvmt.	Volume (All)	Queue (m)		Stop Delay (s)	Delay (s)	LOS	Critical Mvmt		Intersection	
					50th	95th				Delay	LOS	Delay	LOS
260	Adelaide St / Division St	TWSC	NBL	0	0	100	0	0	A	19.0	C	2.7	A
260	Adelaide St / Division St	TWSC	NBT	598	0	100	2	4	A				
260	Adelaide St / Division St	TWSC	NBR	0	0	100	0	0	A				
260	Adelaide St / Division St	TWSC	SBL	0	0	30	0	0	A				
260	Adelaide St / Division St	TWSC	SBT	432	0	30	0	1	A				
260	Adelaide St / Division St	TWSC	SBR	66	0	30	0	0	A				
260	Adelaide St / Division St	TWSC	EBL	0	0	0	0	0	A				
260	Adelaide St / Division St	TWSC	EBT	0	0	0	0	0	A				
260	Adelaide St / Division St	TWSC	EBR	0	0	0	0	0	A				
260	Adelaide St / Division St	TWSC	WBL	0	0	5	0	0	A				
260	Adelaide St / Division St	TWSC	WBT	10	0	5	9	19	C				
260	Adelaide St / Division St	TWSC	WBR	0	0	5	0	0	A				
270	Stanley St / Division St	TWSC	NBL	0	0	0	0	0	A	16.0	C	2.3	A
270	Stanley St / Division St	TWSC	NBT	595	0	0	0	1	A				
270	Stanley St / Division St	TWSC	SBT	365	0	30	1	3	A				
270	Stanley St / Division St	TWSC	SBR	67	0	30	1	2	A				
270	Stanley St / Division St	TWSC	EBL	4	5	5	8	16	C				
270	Stanley St / Division St	TWSC	EBR	60	5	5	3	10	A				
280	Pine St / Division St	Signalized	NBL	38	20	75	9	15	B	35.0	C	9.8	A
280	Pine St / Division St	Signalized	NBT	522	20	75	4	7	A				
280	Pine St / Division St	Signalized	NBR	14	20	75	5	8	A				
280	Pine St / Division St	Signalized	SBL	30	30	70	12	19	B				
280	Pine St / Division St	Signalized	SBT	395	30	70	5	8	A				
280	Pine St / Division St	Signalized	SBR	6	30	70	4	6	A				
280	Pine St / Division St	Signalized	EBL	7	5	15	29	35	C				
280	Pine St / Division St	Signalized	EBT	28	5	15	24	29	C				
280	Pine St / Division St	Signalized	EBR	10	5	15	5	10	A				
280	Pine St / Division St	Signalized	WBL	4	10	25	24	32	C				
280	Pine St / Division St	Signalized	WBT	44	10	25	22	29	C				
280	Pine St / Division St	Signalized	WBR	65	10	25	6	12	B				
290	Quebec St / Division St	TWSC	NBT	574	0	65	0	1	A	12.0	B	1.2	A
290	Quebec St / Division St	TWSC	NBR	0	0	65	0	0	A				
290	Quebec St / Division St	TWSC	SBL	0	0	50	0	0	A				
290	Quebec St / Division St	TWSC	SBT	409	0	50	0	1	A				
290	Quebec St / Division St	TWSC	WBL	14	0	5	4	12	B				
290	Quebec St / Division St	TWSC	WBR	0	0	5	0	0	A				
300	York St / Division St	Signalized	NBL	0	35	35	0	0	A	32.0	C	6.6	A
300	York St / Division St	Signalized	NBT	519	35	35	2	4	A				
300	York St / Division St	Signalized	NBR	12	35	35	0	2	A				
300	York St / Division St	Signalized	SBL	12	10	45	8	12	B				
300	York St / Division St	Signalized	SBT	409	10	45	2	3	A				
300	York St / Division St	Signalized	SBR	0	10	45	0	0	A				
300	York St / Division St	Signalized	EBL	0	5	20	0	0	A				
300	York St / Division St	Signalized	EBT	50	5	20	27	32	C				
300	York St / Division St	Signalized	EBR	6	5	20	25	29	C				
300	York St / Division St	Signalized	WBL	14	10	25	19	25	C				
300	York St / Division St	Signalized	WBT	32	10	25	22	29	C				
300	York St / Division St	Signalized	WBR	56	10	25	6	14	B				
310	Main St / Division St	TWSC	NBT	529	20	60	3	6	A	8.0	A	3.3	A
310	Main St / Division St	TWSC	NBR	0	20	60	0	0	A				
310	Main St / Division St	TWSC	SBL	0	35	35	0	0	A				
310	Main St / Division St	TWSC	SBT	429	35	35	0	0	A				
310	Main St / Division St	TWSC	WBL	6	0	5	1	8	A				
310	Main St / Division St	TWSC	WBR	0	0	5	0	0	A				
320	Hamilton St / Division St	TWSC	NBL	12	0	25	1	4	A	14.0	B	1.2	A
320	Hamilton St / Division St	TWSC	NBT	524	0	25	0	2	A				
320	Hamilton St / Division St	TWSC	SBT	436	0	0	0	0	A				
320	Hamilton St / Division St	TWSC	SBR	0	0	0	0	0	A				
320	Hamilton St / Division St	TWSC	EBL	4	0	5	6	14	B				
320	Hamilton St / Division St	TWSC	EBR	0	0	5	0	0	A				

Williamsville Operational Analysis

2036 No Mitigation - Approved Growth, 35% Auto M.S. - PM Peak

Measures of Effectiveness Details



Node	Location	Control	Mvmt.	Volume (All)	Queue (m)		Stop Delay (s)	Delay (s)	LOS	Critical Mvmt		Intersection	
					50th	95th				Delay	LOS	Delay	LOS
330	Raglan St / Division St	TWSC	NBT	525	0	0	0	0	A	12.0	B	0.4	A
330	Raglan St / Division St	TWSC	NBR	0	0	0	0	0	A				
330	Raglan St / Division St	TWSC	SBL	0	0	0	0	0	A				
330	Raglan St / Division St	TWSC	SBT	435	0	0	0	0	A				
330	Raglan St / Division St	TWSC	WBL	21	5	5	3	12	B				
330	Raglan St / Division St	TWSC	WBR	12	5	5	2	10	A				
340	Elm St / Division St	TWSC	NBL	62	0	45	2	4	A	10.0	A	0.9	A
340	Elm St / Division St	TWSC	NBT	524	0	45	0	1	A				
340	Elm St / Division St	TWSC	SBT	415	0	0	0	0	A				
340	Elm St / Division St	TWSC	SBR	41	0	0	0	2	A				
340	Elm St / Division St	TWSC	EBL	2	0	5	3	10	A				
340	Elm St / Division St	TWSC	EBR	4	0	5	1	8	A				
350	Ellice St / Division St	TWSC	NBT	571	0	45	0	0	A	10.0	A	0.6	A
350	Ellice St / Division St	TWSC	NBR	2	0	45	0	0	A				
350	Ellice St / Division St	TWSC	SBL	6	0	0	1	4	A				
350	Ellice St / Division St	TWSC	SBT	414	0	0	0	1	A				
350	Ellice St / Division St	TWSC	WBL	0	0	5	0	0	A				
350	Ellice St / Division St	TWSC	WBR	14	0	5	2	10	A				
360	Colborne St / Division St	TWSC	NBL	4	0	20	0	1	A	11.0	B	1.5	A
360	Colborne St / Division St	TWSC	NBT	558	0	20	0	0	A				
360	Colborne St / Division St	TWSC	NBR	0	0	20	0	0	A				
360	Colborne St / Division St	TWSC	SBL	4	0	40	5	9	A				
360	Colborne St / Division St	TWSC	SBT	406	0	40	1	3	A				
360	Colborne St / Division St	TWSC	SBR	4	0	40	0	1	A				
360	Colborne St / Division St	TWSC	EBL	2	0	5	2	9	A				
360	Colborne St / Division St	TWSC	EBT	4	0	5	3	11	B				
360	Colborne St / Division St	TWSC	EBR	0	0	5	0	0	A				
360	Colborne St / Division St	TWSC	WBL	0	0	5	0	0	A				
360	Colborne St / Division St	TWSC	WBT	0	0	5	0	0	A				
360	Colborne St / Division St	TWSC	WBR	14	0	5	2	10	A				
370	Queen St / Division St	Signalized	NBT	184	15	25	6	8	A	28.0	C	17.5	B
370	Queen St / Division St	Signalized	NBR	102	15	25	1	9	A				
370	Queen St / Division St	Signalized	SBL	96	50	80	17	26	C				
370	Queen St / Division St	Signalized	SBT	315	50	80	14	20	B				
370	Queen St / Division St	Signalized	WBL	440	50	105	16	28	C				
370	Queen St / Division St	Signalized	WBR	377	50	105	1	8	A				



Williamsville Operational Analysis

2036 No Mitigation - Ultimate Growth, 22% Auto M.S. - AM Peak

Measures of Effectiveness Details

ID	Intersection Name	Control Type	Number of Vehicles	50th %ile Queue (m)	95th %ile Queue (m)	Avg. Vehicle Delay (sec)	Avg. Stop Delay (sec)	LOS
10	Princess St / Concession St	Signalized	2,869	46.1	72.9	27.8	22.2	C
20	Princess St / Regent St	TWSC	1,297	6.4	62.4	4.4	0.8	-
30	Princess St / Drayton Av	TWSC	1,260	12.6	47.4	2.5	0.7	-
40	Princess St / Macdonnell Av	Signalized	1,200	68.6	112.4	15.9	10.0	B
50	Princess St / Smith St	TWSC	1,012	25.5	45.4	2.6	1.1	-
60	Princess St / Victoria St	Signalized	1,247	23.8	70.2	8.7	4.7	A
70	Princess St / Nelson St	TWSC	1,170	5.7	74.1	3.8	1.2	-
80	Princess St / Albert St	Signalized	1,139	38.1	83.0	15.1	9.7	B
90	Princess St / Frontenac St	TWSC	1,034	0.0	35.8	1.7	0.0	-
100	Princess St / Alfred St	Signalized	1,356	43.7	74.1	23.5	16.4	C
110	Princess St / Chatham St	TWSC	953	0.1	44.0	2.1	0.1	-
120	Princess St / University Av	Signalized	882	15.7	54.4	6.0	2.8	A
130	Princess St / Division St	Signalized	1,096	19.4	49.2	15.7	10.7	B
140	Concession St / Drayton Av	TWSC	944	0.0	119.0	7.3	3.2	-
150	Concession St / Leroy Grant Dr (S)	TWSC	915	54.6	74.5	7.9	3.9	-
155	Concession St / Leroy Grant Drive (N)	TWSC	705	0.3	0.9	0.7	0.1	-
160	Concession St / Macdonnell St	Signalized	1,550	50.1	76.9	13.8	9.5	B
170	Concession St / Connaught St	TWSC	1,273	0.0	89.7	3.5	2.0	-
180	Concession St / Victoria St	Signalized	1,355	37.7	84.6	11.9	7.7	B
190	Concession St / Nelson St	TWSC	1,229	0.1	64.7	1.8	1.1	-
200	Concession St / Kingscourt Av	TWSC	1,204	0.2	47.9	2.7	1.1	-
210	Concession St / Fergus St	TWSC	1,213	0.2	55.3	4.9	2.9	-
220	Concession St / Grey St	TWSC	1,246	13.8	61.1	10.5	7.2	-
230	Concession St / Alfred St	Signalized	1,330	43.6	64.1	11.9	7.2	B
240	Concession St / Lansdowne St	TWSC	1,010	0.0	0.0	0.5	0.0	-
250	Concession St / Division St	Signalized	1,769	40.7	103.2	22.6	16.3	C
260	Adelaide St / Division St	TWSC	757	0.0	22.1	0.7	0.0	-
270	Stanley St / Division St	TWSC	702	0.4	19.4	2.0	0.8	-
280	Pine St / Division St	Signalized	785	12.9	47.0	8.6	4.8	A
290	Quebec St / Division St	TWSC	677	0.0	32.8	0.9	0.0	-
300	York St / Division St	Signalized	761	15.2	42.2	7.4	4.9	A
310	Main St / Division St	TWSC	646	23.6	28.6	0.8	0.0	-
320	Hamilton St / Division St	TWSC	629	0.0	0.1	0.1	0.0	-
330	Raglan St / Division St	TWSC	627	0.2	0.2	0.4	0.1	-
340	Elm St / Division St	TWSC	614	0.0	0.1	0.2	0.0	-
350	Ellice St / Division St	TWSC	595	0.0	0.1	0.2	0.1	-
360	Colborne St / Division St	TWSC	601	0.2	19.1	1.2	0.1	-
370	Queen St / Division St	Signalized	879	28.9	50.4	15.4	9.4	B
<b>Total</b>			<b>40,531</b>	<b>629</b>	<b>1,929</b>	<b>268</b>	<b>163</b>	



Williamsville Operational Analysis

2036 No Mitigation - Ultimate Growth, 22% Auto M.S. - AM Peak

Measures of Effectiveness Details

Node	Location	Control	Mvmt.	Volume (All)	Queue (m)		Stop Delay (s)	Delay (s)	LOS	Critical Mvmt		Intersection	
					50th	95th				Delay	LOS	Delay	LOS
10	Princess St / Concession St	Signalized	NBL	163	35	50	37	45	D	47.0	D	27.8	C
10	Princess St / Concession St	Signalized	NBT	198	35	50	40	47	D				
10	Princess St / Concession St	Signalized	NBR	42	35	50	2	4	A				
10	Princess St / Concession St	Signalized	SBL	526	75	105	30	38	D				
10	Princess St / Concession St	Signalized	SBT	570	75	105	30	38	D				
10	Princess St / Concession St	Signalized	SBR	32	75	105	19	24	C				
10	Princess St / Concession St	Signalized	EBT	402	30	65	25	31	C				
10	Princess St / Concession St	Signalized	EBR	277	30	65	0	2	A				
10	Princess St / Concession St	Signalized	WBT	241	20	40	25	30	C				
10	Princess St / Concession St	Signalized	WBR	334	20	40	0	0	A				
10	Princess St / Concession St	Signalized	WBL	84	20	40	1	4	A				
20	Princess St / Regent St	TWSC	NBL	0	5	10	0	0	A	16.0	C	4.4	A
20	Princess St / Regent St	TWSC	NBR	29	5	10	7	16	C				
20	Princess St / Regent St	TWSC	EBT	765	10	85	1	6	A				
20	Princess St / Regent St	TWSC	EBR	50	10	85	1	3	A				
20	Princess St / Regent St	TWSC	WBL	8	0	25	4	8	A				
20	Princess St / Regent St	TWSC	WBT	445	0	25	0	1	A				
30	Princess St / Drayton Av	TWSC	SBL	0	0	45	0	0	A	14.0	B	2.5	A
30	Princess St / Drayton Av	TWSC	SBR	5	0	45	1	14	B				
30	Princess St / Drayton Av	TWSC	EBL	117	20	75	2	5	A				
30	Princess St / Drayton Av	TWSC	EBT	677	20	75	1	3	A				
30	Princess St / Drayton Av	TWSC	WBT	450	0	0	0	1	A				
30	Princess St / Drayton Av	TWSC	WBR	11	0	0	0	1	A				
40	Princess St / Macdonnell Av	Signalized	NBL	44	10	40	12	19	B	23.0	C	15.9	B
40	Princess St / Macdonnell Av	Signalized	NBT	26	10	40	11	17	B				
40	Princess St / Macdonnell Av	Signalized	NBR	17	10	40	7	12	B				
40	Princess St / Macdonnell Av	Signalized	SBL	7	40	40	15	22	C				
40	Princess St / Macdonnell Av	Signalized	SBT	14	40	40	9	13	B				
40	Princess St / Macdonnell Av	Signalized	SBR	56	40	40	2	9	A				
40	Princess St / Macdonnell Av	Signalized	EBL	29	90	165	15	23	C				
40	Princess St / Macdonnell Av	Signalized	EBT	606	90	165	11	18	B				
40	Princess St / Macdonnell Av	Signalized	EBR	30	90	165	8	14	B				
40	Princess St / Macdonnell Av	Signalized	WBL	0	50	50	0	0	A				
40	Princess St / Macdonnell Av	Signalized	WBT	366	50	50	9	13	B				
40	Princess St / Macdonnell Av	Signalized	WBR	5	50	50	7	9	A				
50	Princess St / Smith St	TWSC	SBL	2	40	40	0	0	A	17.0	C	2.6	A
50	Princess St / Smith St	TWSC	SBR	14	40	40	5	17	C				
50	Princess St / Smith St	TWSC	EBL	7	40	40	1	4	A				
50	Princess St / Smith St	TWSC	EBT	623	40	40	0	1	A				
50	Princess St / Smith St	TWSC	WBT	353	0	55	3	5	A				
50	Princess St / Smith St	TWSC	WBR	13	0	55	1	2	A				
60	Princess St / Victoria St	Signalized	NBL	35	10	35	19	26	C	26.0	C	8.7	A
60	Princess St / Victoria St	Signalized	NBT	25	10	35	17	23	C				
60	Princess St / Victoria St	Signalized	NBR	45	10	35	8	15	B				
60	Princess St / Victoria St	Signalized	SBL	13	5	20	16	23	C				
60	Princess St / Victoria St	Signalized	SBT	52	5	20	15	20	B				
60	Princess St / Victoria St	Signalized	SBR	0	5	20	0	0	A				
60	Princess St / Victoria St	Signalized	EBL	2	20	85	0	3	A				
60	Princess St / Victoria St	Signalized	EBT	612	20	85	2	6	A				
60	Princess St / Victoria St	Signalized	EBR	12	20	85	3	7	A				
60	Princess St / Victoria St	Signalized	WBL	34	35	65	10	14	B				
60	Princess St / Victoria St	Signalized	WBT	331	35	65	5	8	A				
60	Princess St / Victoria St	Signalized	WBR	86	35	65	2	5	A				
70	Princess St / Nelson St	TWSC	NBL	1	0	45	0	0	A	18.0	C	3.8	A
70	Princess St / Nelson St	TWSC	NBT	7	0	45	6	18	C				
70	Princess St / Nelson St	TWSC	NBR	7	0	45	3	14	B				
70	Princess St / Nelson St	TWSC	SBL	8	0	5	5	16	C				
70	Princess St / Nelson St	TWSC	SBT	0	0	5	0	0	A				
70	Princess St / Nelson St	TWSC	SBR	12	0	5	2	16	C				
70	Princess St / Nelson St	TWSC	EBL	77	10	90	2	7	A				
70	Princess St / Nelson St	TWSC	EBT	586	10	90	1	4	A				
70	Princess St / Nelson St	TWSC	EBR	9	10	90	2	5	A				
70	Princess St / Nelson St	TWSC	WBL	15	0	55	5	9	A				
70	Princess St / Nelson St	TWSC	WBT	448	0	55	1	2	A				
70	Princess St / Nelson St	TWSC	WBR	0	0	55	0	0	A				

Williamsville Operational Analysis

2036 No Mitigation - Ultimate Growth, 22% Auto M.S. - AM Peak

Measures of Effectiveness Details



Node	Location	Control	Mvmt.	Volume (All)	Queue (m)		Stop Delay (s)	Delay (s)	LOS	Critical Mvmt		Intersection	
					50th	95th				Delay	LOS	Delay	LOS
80	Princess St / Albert St	Signalized	NBL	15	5	15	17	23	C	37.0	D	15.1	B
80	Princess St / Albert St	Signalized	NBT	4	5	15	13	19	B				
80	Princess St / Albert St	Signalized	NBR	36	5	15	2	5	A				
80	Princess St / Albert St	Signalized	SBL	4	5	15	4	14	B				
80	Princess St / Albert St	Signalized	SBT	30	5	15	8	11	B				
80	Princess St / Albert St	Signalized	SBR	53	5	15	2	6	A				
80	Princess St / Albert St	Signalized	EBL	1	55	115	29	37	D				
80	Princess St / Albert St	Signalized	EBT	572	55	115	13	19	B				
80	Princess St / Albert St	Signalized	EBR	20	55	115	13	18	B				
80	Princess St / Albert St	Signalized	WBL	7	25	60	23	32	C				
80	Princess St / Albert St	Signalized	WBT	396	25	60	6	11	B				
80	Princess St / Albert St	Signalized	WBR	1	25	60	0	0	A				
90	Princess St / Frontenac St	TWSC	NBL	1	0	5	0	6	A	9.0	A	1.7	A
90	Princess St / Frontenac St	TWSC	NBT	1	0	5	0	0	A				
90	Princess St / Frontenac St	TWSC	NBR	1	0	5	0	0	A				
90	Princess St / Frontenac St	TWSC	SBL	0	0	5	0	0	A				
90	Princess St / Frontenac St	TWSC	SBT	0	0	5	0	0	A				
90	Princess St / Frontenac St	TWSC	SBR	3	0	5	2	9	A				
90	Princess St / Frontenac St	TWSC	EBL	43	0	60	1	3	A				
90	Princess St / Frontenac St	TWSC	EBT	568	0	60	0	2	A				
90	Princess St / Frontenac St	TWSC	EBR	5	0	60	0	3	A				
90	Princess St / Frontenac St	TWSC	WBL	12	0	0	0	3	A				
90	Princess St / Frontenac St	TWSC	WBT	398	0	0	0	1	A				
90	Princess St / Frontenac St	TWSC	WBR	2	0	0	0	0	A				
100	Princess St / Alfred St	Signalized	NBL	68	25	45	17	25	C	28.0	C	23.5	C
100	Princess St / Alfred St	Signalized	NBT	89	25	45	15	22	C				
100	Princess St / Alfred St	Signalized	NBR	84	25	45	9	16	B				
100	Princess St / Alfred St	Signalized	SBL	26	25	50	17	27	C				
100	Princess St / Alfred St	Signalized	SBT	133	25	50	13	19	B				
100	Princess St / Alfred St	Signalized	SBR	98	25	50	6	12	B				
100	Princess St / Alfred St	Signalized	EBL	11	65	105	18	25	C				
100	Princess St / Alfred St	Signalized	EBT	534	65	105	20	28	C				
100	Princess St / Alfred St	Signalized	EBR	16	65	105	15	21	C				
100	Princess St / Alfred St	Signalized	WBL	12	35	60	21	27	C				
100	Princess St / Alfred St	Signalized	WBT	266	35	60	18	24	C				
100	Princess St / Alfred St	Signalized	WBR	19	35	60	3	8	A				
110	Princess St / Chatham St	TWSC	SBL	0	5	5	0	0	A	14.0	B	2.1	A
110	Princess St / Chatham St	TWSC	SBR	24	5	5	1	14	B				
110	Princess St / Chatham St	TWSC	EBL	45	0	45	1	4	A				
110	Princess St / Chatham St	TWSC	EBT	595	0	45	0	2	A				
110	Princess St / Chatham St	TWSC	WBT	275	0	45	0	1	A				
110	Princess St / Chatham St	TWSC	WBR	14	0	45	0	0	A				
120	Princess St / University Av	Signalized	NBL	25	0	15	17	22	C	26.0	C	6.0	A
120	Princess St / University Av	Signalized	NBR	26	0	15	2	7	A				
120	Princess St / University Av	Signalized	EBT	500	20	70	2	5	A				
120	Princess St / University Av	Signalized	EBR	58	20	70	1	4	A				
120	Princess St / University Av	Signalized	WBL	8	10	30	18	26	C				
120	Princess St / University Av	Signalized	WBT	265	10	30	3	6	A				
130	Princess St / Division St	Signalized	NBL	55	5	20	13	22	C	27.0	C	15.7	B
130	Princess St / Division St	Signalized	NBT	51	5	20	11	16	B				
130	Princess St / Division St	Signalized	NBR	1	5	20	0	0	A				
130	Princess St / Division St	Signalized	SBL	143	5	55	3	5	A				
130	Princess St / Division St	Signalized	SBT	102	5	55	3	4	A				
130	Princess St / Division St	Signalized	SBR	219	5	55	0	1	A				
130	Princess St / Division St	Signalized	EBL	132	35	50	19	27	C				
130	Princess St / Division St	Signalized	EBT	367	35	50	19	27	C				
130	Princess St / Division St	Signalized	EBR	26	35	50	8	16	B				

Williamsville Operational Analysis

2036 No Mitigation - Ultimate Growth, 22% Auto M.S. - AM Peak

Measures of Effectiveness Details



Node	Location	Control	Mvmt.	Volume (All)	Queue (m)		Stop Delay (s)	Delay (s)	LOS	Critical Mvmt		Intersection	
					50th	95th				Delay	LOS	Delay	LOS
140	Concession St / Drayton Av	TWSC	NBR	8	0	5	31	42	E	42.0	E	7.3	A
140	Concession St / Drayton Av	TWSC	EBT	936	0	120	3	7	A				
140	Concession St / Drayton Av	TWSC	EBR	0	0	120	0	0	A				
150	Concession St / Leroy Grant Dr (S)	TWSC	SBL	7	0	5	10	21	C	21.0	C	7.9	A
150	Concession St / Leroy Grant Dr (S)	TWSC	EBL	39	55	75	1	4	A				
150	Concession St / Leroy Grant Dr (S)	TWSC	EBT	869	55	75	4	8	A				
155	Concession St / Leroy Grant Drive (N)	TWSC	NBL	28	5	5	2	9	A	11.0	B	0.7	A
155	Concession St / Leroy Grant Drive (N)	TWSC	NBT	11	5	5	2	10	A				
155	Concession St / Leroy Grant Drive (N)	TWSC	SBT	7	0	5	1	11	B				
155	Concession St / Leroy Grant Drive (N)	TWSC	SBR	76	0	5	0	0	A				
155	Concession St / Leroy Grant Drive (N)	TWSC	WBT	557	0	0	0	0	A				
155	Concession St / Leroy Grant Drive (N)	TWSC	WBR	26	0	0	0	1	A				
160	Concession St / Macdonnell St	Signalized	NBL	64	10	25	20	26	C	48.0	D	13.8	B
160	Concession St / Macdonnell St	Signalized	NBT	0	10	25	0	0	A				
160	Concession St / Macdonnell St	Signalized	NBR	17	10	25	13	18	B				
160	Concession St / Macdonnell St	Signalized	SBR	41	0	5	1	3	A				
160	Concession St / Macdonnell St	Signalized	EBL	37	75	80	13	19	B				
160	Concession St / Macdonnell St	Signalized	EBT	701	75	80	7	11	B				
160	Concession St / Macdonnell St	Signalized	EBR	141	75	80	5	9	A				
160	Concession St / Macdonnell St	Signalized	WBL	71	20	85	39	48	D				
160	Concession St / Macdonnell St	Signalized	WBT	477	20	85	9	13	B				
160	Concession St / Macdonnell St	Signalized	WBR	1	20	85	0	0	A				
170	Concession St / Connaught St	TWSC	SBL	9	0	5	10	20	C	20.0	C	3.5	A
170	Concession St / Connaught St	TWSC	SBR	6	0	5	8	18	C				
170	Concession St / Connaught St	TWSC	EBL	20	0	95	3	6	A				
170	Concession St / Connaught St	TWSC	EBT	696	0	95	1	2	A				
170	Concession St / Connaught St	TWSC	WBT	542	0	85	3	5	A				
170	Concession St / Connaught St	TWSC	WBR	0	0	85	0	0	A				
180	Concession St / Victoria St	Signalized	NBL	6	5	15	26	33	C	33.0	C	11.9	B
180	Concession St / Victoria St	Signalized	NBT	19	5	15	22	28	C				
180	Concession St / Victoria St	Signalized	NBR	38	5	15	5	11	B				
180	Concession St / Victoria St	Signalized	SBL	3	5	10	13	20	B				
180	Concession St / Victoria St	Signalized	SBT	33	5	10	22	27	C				
180	Concession St / Victoria St	Signalized	SBR	40	5	10	2	10	A				
180	Concession St / Victoria St	Signalized	EBL	19	35	95	10	15	B				
180	Concession St / Victoria St	Signalized	EBT	662	35	95	7	10	A				
180	Concession St / Victoria St	Signalized	EBR	9	35	95	6	11	B				
180	Concession St / Victoria St	Signalized	WBL	25	50	90	17	25	C				
180	Concession St / Victoria St	Signalized	WBT	501	50	90	7	12	B				
180	Concession St / Victoria St	Signalized	WBR	0	50	90	0	0	A				
190	Concession St / Nelson St	TWSC	NBL	7	0	5	18	26	D	26.0	D	1.8	A
190	Concession St / Nelson St	TWSC	NBT	0	0	5	0	0	A				
190	Concession St / Nelson St	TWSC	NBR	3	0	5	2	10	A				
190	Concession St / Nelson St	TWSC	SBL	0	5	5	0	0	A				
190	Concession St / Nelson St	TWSC	SBT	0	5	5	0	0	A				
190	Concession St / Nelson St	TWSC	SBR	25	5	5	0	6	A				
190	Concession St / Nelson St	TWSC	EBL	38	0	85	2	5	A				
190	Concession St / Nelson St	TWSC	EBT	664	0	85	1	1	A				
190	Concession St / Nelson St	TWSC	EBR	0	0	85	0	0	A				
190	Concession St / Nelson St	TWSC	WBL	0	0	40	0	0	A				
190	Concession St / Nelson St	TWSC	WBT	492	0	40	1	2	A				
190	Concession St / Nelson St	TWSC	WBR	0	0	40	0	0	A				

Williamsville Operational Analysis

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Measures of Effectiveness Details



Node	Location	Control	Mvmt.	Volume (All)	Queue (m)		Stop Delay (s)	Delay (s)	LOS	Critical Mvmt		Intersection	
					50th	95th				Delay	LOS	Delay	LOS
200	Concession St / Kingscourt Av	TWSC	SBL	44	5	20	14	24	C	24.0	C	2.7	A
200	Concession St / Kingscourt Av	TWSC	SBR	3	5	20	4	20	C				
200	Concession St / Kingscourt Av	TWSC	EBL	41	0	85	3	7	A				
200	Concession St / Kingscourt Av	TWSC	EBT	626	0	85	1	3	A				
200	Concession St / Kingscourt Av	TWSC	WBT	486	0	0	0	0	A				
200	Concession St / Kingscourt Av	TWSC	WBR	4	0	0	0	0	A				
210	Concession St / Fergus St	TWSC	SBL	44	5	15	33	43	E	43.0	E	4.9	A
210	Concession St / Fergus St	TWSC	SBR	3	5	15	0	8	A				
210	Concession St / Fergus St	TWSC	EBL	30	0	100	5	8	A				
210	Concession St / Fergus St	TWSC	EBT	634	0	100	3	6	A				
210	Concession St / Fergus St	TWSC	WBT	489	0	0	0	0	A				
210	Concession St / Fergus St	TWSC	WBR	13	0	0	0	0	A				
220	Concession St / Grey St	TWSC	SBL	43	5	45	90	104	F	141.0	F	10.5	B
220	Concession St / Grey St	TWSC	SBR	3	5	45	118	141	F				
220	Concession St / Grey St	TWSC	EBL	20	25	105	7	13	B				
220	Concession St / Grey St	TWSC	EBT	661	25	105	7	12	B				
220	Concession St / Grey St	TWSC	WBT	497	0	5	0	0	A				
220	Concession St / Grey St	TWSC	WBR	22	0	5	0	0	A				
230	Concession St / Alfred St	Signalized	NBL	44	5	25	16	22	C	22.0	C	11.9	B
230	Concession St / Alfred St	Signalized	NBT	10	5	25	16	20	B				
230	Concession St / Alfred St	Signalized	NBR	36	5	25	4	10	A				
230	Concession St / Alfred St	Signalized	SBL	2	5	20	1	7	A				
230	Concession St / Alfred St	Signalized	SBT	33	5	20	14	19	B				
230	Concession St / Alfred St	Signalized	SBR	39	5	20	5	10	A				
230	Concession St / Alfred St	Signalized	EBL	34	55	60	12	18	B				
230	Concession St / Alfred St	Signalized	EBT	495	55	60	7	12	B				
230	Concession St / Alfred St	Signalized	EBR	174	55	60	1	3	A				
230	Concession St / Alfred St	Signalized	WBL	28	40	85	13	20	B				
230	Concession St / Alfred St	Signalized	WBT	435	40	85	8	13	B				
230	Concession St / Alfred St	Signalized	WBR	0	40	85	0	0	A				
240	Concession St / Lansdowne St	TWSC	NBL	0	0	0	0	0	A	1.0	A	0.5	A
240	Concession St / Lansdowne St	TWSC	NBR	0	0	0	0	0	A				
240	Concession St / Lansdowne St	TWSC	EBT	538	0	0	0	1	A				
240	Concession St / Lansdowne St	TWSC	EBR	0	0	0	0	0	A				
240	Concession St / Lansdowne St	TWSC	WBL	3	0	0	0	0	A				
240	Concession St / Lansdowne St	TWSC	WBT	469	0	0	0	0	A				
250	Concession St / Division St	Signalized	NBL	17	30	70	19	26	C	49.0	D	22.6	C
250	Concession St / Division St	Signalized	NBT	235	30	70	16	22	C				
250	Concession St / Division St	Signalized	NBR	40	30	70	11	17	B				
250	Concession St / Division St	Signalized	SBL	32	50	120	20	29	C				
250	Concession St / Division St	Signalized	SBT	394	50	120	17	23	C				
250	Concession St / Division St	Signalized	SBR	226	50	120	2	6	A				
250	Concession St / Division St	Signalized	EBL	179	30	100	14	20	B				
250	Concession St / Division St	Signalized	EBT	335	30	100	11	16	B				
250	Concession St / Division St	Signalized	EBR	19	30	100	3	5	A				
250	Concession St / Division St	Signalized	WBL	47	50	105	37	49	D				
250	Concession St / Division St	Signalized	WBT	230	50	105	35	45	D				
250	Concession St / Division St	Signalized	WBR	15	50	105	31	41	D				



Williamsville Operational Analysis

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Measures of Effectiveness Details



Node	Location	Control	Mvmt.	Volume (All)	Queue (m)		Stop Delay (s)	Delay (s)	LOS	Critical Mvmt		Intersection	
					50th	95th				Delay	LOS	Delay	LOS
260	Adelaide St / Division St	TWSC	NBL	0	0	10	0	0	A	12.0	B	0.7	A
260	Adelaide St / Division St	TWSC	NBT	278	0	10	0	0	A				
260	Adelaide St / Division St	TWSC	NBR	3	0	10	0	0	A				
260	Adelaide St / Division St	TWSC	SBL	11	0	30	0	1	A				
260	Adelaide St / Division St	TWSC	SBT	393	0	30	0	1	A				
260	Adelaide St / Division St	TWSC	SBR	58	0	30	0	0	A				
260	Adelaide St / Division St	TWSC	EBL	5	0	5	5	12	B				
260	Adelaide St / Division St	TWSC	EBT	0	0	5	0	0	A				
260	Adelaide St / Division St	TWSC	EBR	0	0	5	0	0	A				
260	Adelaide St / Division St	TWSC	WBL	0	0	5	0	0	A				
260	Adelaide St / Division St	TWSC	WBT	0	0	5	0	0	A				
260	Adelaide St / Division St	TWSC	WBR	9	0	5	0	7	A				
270	Stanley St / Division St	TWSC	NBL	12	0	5	1	3	A	10.0	A	2.0	A
270	Stanley St / Division St	TWSC	NBT	236	0	5	0	0	A				
270	Stanley St / Division St	TWSC	SBT	393	0	30	1	2	A				
270	Stanley St / Division St	TWSC	SBR	0	0	30	0	0	A				
270	Stanley St / Division St	TWSC	EBL	45	5	10	2	10	A				
270	Stanley St / Division St	TWSC	EBR	16	5	10	2	9	A				
280	Pine St / Division St	Signalized	NBL	7	5	20	10	15	B	30.0	C	8.6	A
280	Pine St / Division St	Signalized	NBT	201	5	20	2	4	A				
280	Pine St / Division St	Signalized	NBR	7	5	20	0	1	A				
280	Pine St / Division St	Signalized	SBL	34	20	70	4	6	A				
280	Pine St / Division St	Signalized	SBT	382	20	70	4	8	A				
280	Pine St / Division St	Signalized	SBR	0	20	70	0	0	A				
280	Pine St / Division St	Signalized	EBL	2	5	20	0	0	A				
280	Pine St / Division St	Signalized	EBT	27	5	20	19	24	C				
280	Pine St / Division St	Signalized	EBR	45	5	20	6	11	B				
280	Pine St / Division St	Signalized	WBL	19	5	25	22	28	C				
280	Pine St / Division St	Signalized	WBT	15	5	25	22	30	C				
280	Pine St / Division St	Signalized	WBR	46	5	25	3	9	A				
290	Quebec St / Division St	TWSC	NBT	214	0	0	0	0	A	9.0	A	0.9	A
290	Quebec St / Division St	TWSC	NBR	3	0	0	0	0	A				
290	Quebec St / Division St	TWSC	SBL	3	0	50	0	0	A				
290	Quebec St / Division St	TWSC	SBT	439	0	50	0	1	A				
290	Quebec St / Division St	TWSC	WBL	16	0	5	2	9	A				
290	Quebec St / Division St	TWSC	WBR	2	0	5	0	0	A				
300	York St / Division St	Signalized	NBL	0	20	35	0	0	A	34.0	C	7.4	A
300	York St / Division St	Signalized	NBT	195	20	35	3	5	A				
300	York St / Division St	Signalized	NBR	15	20	35	0	2	A				
300	York St / Division St	Signalized	SBL	53	15	50	5	8	A				
300	York St / Division St	Signalized	SBT	410	15	50	3	5	A				
300	York St / Division St	Signalized	SBR	0	15	50	0	0	A				
300	York St / Division St	Signalized	EBL	0	5	15	0	0	A				
300	York St / Division St	Signalized	EBT	28	5	15	25	30	C				
300	York St / Division St	Signalized	EBR	3	5	15	28	34	C				
300	York St / Division St	Signalized	WBL	23	5	20	21	27	C				
300	York St / Division St	Signalized	WBT	12	5	20	21	28	C				
300	York St / Division St	Signalized	WBR	22	5	20	6	13	B				
310	Main St / Division St	TWSC	NBT	203	0	5	0	2	A	8.0	A	0.8	A
310	Main St / Division St	TWSC	NBR	0	0	5	0	0	A				
310	Main St / Division St	TWSC	SBL	17	35	40	0	1	A				
310	Main St / Division St	TWSC	SBT	418	35	40	0	0	A				
310	Main St / Division St	TWSC	WBL	2	0	5	0	8	A				
310	Main St / Division St	TWSC	WBR	6	0	5	1	8	A				
320	Hamilton St / Division St	TWSC	NBL	2	0	0	0	0	A	7.0	A	0.1	A
320	Hamilton St / Division St	TWSC	NBT	192	0	0	0	0	A				
320	Hamilton St / Division St	TWSC	SBT	397	0	0	0	0	A				
320	Hamilton St / Division St	TWSC	SBR	25	0	0	0	0	A				
320	Hamilton St / Division St	TWSC	EBL	11	0	5	1	7	A				
320	Hamilton St / Division St	TWSC	EBR	2	0	5	0	6	A				

Williamsville Operational Analysis

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Measures of Effectiveness Details



Node	Location	Control	Mvmt.	Volume (All)	Queue (m)		Stop Delay (s)	Delay (s)	LOS	Critical Mvmt		Intersection	
					50th	95th				Delay	LOS	Delay	LOS
330	Raglan St / Division St	TWSC	NBT	190	0	0	0	0	A	10.0	A	0.4	A
330	Raglan St / Division St	TWSC	NBR	15	0	0	0	0	A				
330	Raglan St / Division St	TWSC	SBL	9	0	0	0	1	A				
330	Raglan St / Division St	TWSC	SBT	387	0	0	0	0	A				
330	Raglan St / Division St	TWSC	WBL	22	5	5	2	10	A				
330	Raglan St / Division St	TWSC	WBR	4	5	5	0	7	A				
340	Elm St / Division St	TWSC	NBL	1	0	0	0	1	A	8.0	A	0.2	A
340	Elm St / Division St	TWSC	NBT	192	0	0	0	0	A				
340	Elm St / Division St	TWSC	SBT	391	0	0	0	0	A				
340	Elm St / Division St	TWSC	SBR	18	0	0	0	1	A				
340	Elm St / Division St	TWSC	EBL	12	0	5	1	8	A				
340	Elm St / Division St	TWSC	EBR	0	0	5	0	0	A				
350	Ellice St / Division St	TWSC	NBT	190	0	0	0	0	A	13.0	B	0.2	A
350	Ellice St / Division St	TWSC	NBR	2	0	0	0	0	A				
350	Ellice St / Division St	TWSC	SBL	12	0	0	0	1	A				
350	Ellice St / Division St	TWSC	SBT	379	0	0	0	0	A				
350	Ellice St / Division St	TWSC	WBL	8	0	5	4	13	B				
350	Ellice St / Division St	TWSC	WBR	4	0	5	0	7	A				
360	Colborne St / Division St	TWSC	NBL	0	0	20	0	0	A	12.0	B	1.2	A
360	Colborne St / Division St	TWSC	NBT	181	0	20	0	0	A				
360	Colborne St / Division St	TWSC	NBR	1	0	20	0	0	A				
360	Colborne St / Division St	TWSC	SBL	7	0	20	1	3	A				
360	Colborne St / Division St	TWSC	SBT	372	0	20	0	1	A				
360	Colborne St / Division St	TWSC	SBR	5	0	20	0	0	A				
360	Colborne St / Division St	TWSC	EBL	9	5	5	1	9	A				
360	Colborne St / Division St	TWSC	EBT	9	5	5	2	10	A				
360	Colborne St / Division St	TWSC	EBR	7	5	5	1	9	A				
360	Colborne St / Division St	TWSC	WBL	7	0	5	4	12	B				
360	Colborne St / Division St	TWSC	WBT	0	0	5	0	0	A				
360	Colborne St / Division St	TWSC	WBR	3	0	5	0	7	A				
370	Queen St / Division St	Signalized	NBT	66	10	25	7	10	A	23.0	C	15.4	B
370	Queen St / Division St	Signalized	NBR	116	10	25	1	9	A				
370	Queen St / Division St	Signalized	SBL	120	45	75	15	23	C				
370	Queen St / Division St	Signalized	SBT	265	45	75	14	20	B				
370	Queen St / Division St	Signalized	WBL	196	20	35	11	17	B				
370	Queen St / Division St	Signalized	WBR	116	20	35	0	4	A				



Williamsville Operational Analysis

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Measures of Effectiveness Details

ID	Intersection Name	Control Type	Number of Vehicles	50th %ile Queue (m)	95th %ile Queue (m)	Avg. Vehicle Delay (sec)	Avg. Stop Delay (sec)	LOS
10	Princess St / Concession St	Signalized	3,641	157.4	218.3	55.8	45.5	E
20	Princess St / Regent St	TWSC	1,245	0.1	28.5	1.9	0.5	-
30	Princess St / Drayton Av	TWSC	1,188	4.4	26.6	2.4	0.3	-
40	Princess St / Macdonnell Av	Signalized	1,226	64.2	125.2	18.8	12.6	B
50	Princess St / Smith St	TWSC	977	27.9	54.7	3.2	1.4	-
60	Princess St / Victoria St	Signalized	1,398	27.1	81.9	11.7	6.7	B
70	Princess St / Nelson St	TWSC	1,272	10.7	69.2	3.9	1.4	-
80	Princess St / Albert St	Signalized	1,284	32.1	66.8	14.2	9.3	B
90	Princess St / Frontenac St	TWSC	1,062	3.0	50.9	2.1	0.7	-
100	Princess St / Alfred St	Signalized	1,426	52.1	80.5	24.4	17.3	C
110	Princess St / Chatham St	TWSC	1,141	12.9	70.3	3.2	0.7	-
120	Princess St / University Av	Signalized	1,007	23.7	56.7	8.4	4.5	A
130	Princess St / Division St	Signalized	1,324	22.8	57.2	15.9	10.8	B
140	Concession St / Drayton Av	TWSC	1,232	318.8	318.9	58.0	28.2	-
150	Concession St / Leroy Grant Dr (S)	TWSC	1,209	73.7	73.9	33.2	18.1	-
155	Concession St / Leroy Grant Drive (N)	TWSC	1,555	4.8	5.3	5.2	3.1	-
160	Concession St / Macdonnell St	Signalized	2,511	73.7	82.6	16.8	11.6	B
170	Concession St / Connaught St	TWSC	1,991	77.6	105.0	8.4	4.8	-
180	Concession St / Victoria St	Signalized	2,189	93.1	97.5	17.0	10.6	B
190	Concession St / Nelson St	TWSC	1,950	50.8	91.9	9.8	6.0	-
200	Concession St / Kingscourt Av	TWSC	1,852	52.7	94.3	9.4	5.6	-
210	Concession St / Fergus St	TWSC	1,848	56.0	99.5	10.8	6.1	-
220	Concession St / Grey St	TWSC	1,855	50.7	79.4	9.3	6.1	-
230	Concession St / Alfred St	Signalized	1,990	79.9	117.7	28.0	19.8	C
240	Concession St / Lansdowne St	TWSC	1,289	0.0	75.0	3.8	1.3	-
250	Concession St / Division St	Signalized	2,390	104.4	162.4	41.9	32.8	D
260	Adelaide St / Division St	TWSC	1,271	60.8	91.4	24.6	19.1	-
270	Stanley St / Division St	TWSC	1,139	45.6	55.1	13.1	8.0	-
280	Pine St / Division St	Signalized	1,242	49.7	70.3	21.4	15.1	C
290	Quebec St / Division St	TWSC	1,054	40.9	82.2	7.9	4.9	-
300	York St / Division St	Signalized	1,164	26.8	44.1	9.8	7.1	A
310	Main St / Division St	TWSC	1,032	46.8	51.8	11.1	7.4	-
320	Hamilton St / Division St	TWSC	1,066	66.1	66.2	18.0	11.9	-
330	Raglan St / Division St	TWSC	1,078	23.9	35.9	6.2	4.6	-
340	Elm St / Division St	TWSC	1,192	15.8	50.2	7.2	4.7	-
350	Ellice St / Division St	TWSC	1,134	9.8	36.0	3.9	2.1	-
360	Colborne St / Division St	TWSC	1,174	13.0	179.0	6.9	4.3	-
370	Queen St / Division St	Signalized	1,490	42.8	133.4	23.6	13.2	C
<b>Total</b>			<b>56,088</b>	<b>1,917</b>	<b>3,286</b>	<b>571</b>	<b>368</b>	



Williamsville Operational Analysis

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Measures of Effectiveness Details

Node	Location	Control	Mvmt.	Volume (All)	Queue (m)		Stop Delay (s)	Delay (s)	LOS	Critical Mvmt		Intersection	
					50th	95th				Delay	LOS	Delay	LOS
10	Princess St / Concession St	Signalized	NBL	221	30	60	32	40	D	117.0	F	55.8	E
10	Princess St / Concession St	Signalized	NBT	200	30	60	34	41	D				
10	Princess St / Concession St	Signalized	NBR	12	30	60	29	38	D				
10	Princess St / Concession St	Signalized	SBL	706	390	430	88	106	F				
10	Princess St / Concession St	Signalized	SBT	470	390	430	76	92	F				
10	Princess St / Concession St	Signalized	SBR	0	390	430	0	0	A				
10	Princess St / Concession St	Signalized	EBT	351	50	250	93	117	F				
10	Princess St / Concession St	Signalized	EBR	283	50	250	10	16	B				
10	Princess St / Concession St	Signalized	WBT	521	50	75	31	38	D				
10	Princess St / Concession St	Signalized	WBR	843	50	75	0	0	A				
10	Princess St / Concession St	Signalized	WBL	34	50	75	60	70	E				
20	Princess St / Regent St	TWSC	NBL	0	5	5	0	0	A	10.0	A	1.9	A
20	Princess St / Regent St	TWSC	NBR	33	5	5	2	10	A				
20	Princess St / Regent St	TWSC	EBT	665	0	35	0	2	A				
20	Princess St / Regent St	TWSC	EBR	75	0	35	0	1	A				
20	Princess St / Regent St	TWSC	WBL	34	0	20	4	7	A				
20	Princess St / Regent St	TWSC	WBT	438	0	20	1	1	A				
30	Princess St / Drayton Av	TWSC	SBL	8	45	50	9	24	C	24.0	C	2.4	A
30	Princess St / Drayton Av	TWSC	SBR	108	45	50	2	14	B				
30	Princess St / Drayton Av	TWSC	EBL	20	0	10	1	2	A				
30	Princess St / Drayton Av	TWSC	EBT	676	0	10	0	1	A				
30	Princess St / Drayton Av	TWSC	WBT	365	0	50	0	1	A				
30	Princess St / Drayton Av	TWSC	WBR	11	0	50	0	1	A				
40	Princess St / Macdonnell Av	Signalized	NBL	12	10	35	13	21	C	26.0	C	18.8	B
40	Princess St / Macdonnell Av	Signalized	NBT	90	10	35	12	17	B				
40	Princess St / Macdonnell Av	Signalized	NBR	22	10	35	7	12	B				
40	Princess St / Macdonnell Av	Signalized	SBL	5	40	40	17	26	C				
40	Princess St / Macdonnell Av	Signalized	SBT	59	40	40	14	20	B				
40	Princess St / Macdonnell Av	Signalized	SBR	35	40	40	4	8	A				
40	Princess St / Macdonnell Av	Signalized	EBL	32	85	190	18	25	C				
40	Princess St / Macdonnell Av	Signalized	EBT	606	85	190	14	21	C				
40	Princess St / Macdonnell Av	Signalized	EBR	29	85	190	11	17	B				
40	Princess St / Macdonnell Av	Signalized	WBL	0	50	55	0	0	A				
40	Princess St / Macdonnell Av	Signalized	WBT	329	50	55	11	16	B				
40	Princess St / Macdonnell Av	Signalized	WBR	7	50	55	8	13	B				
50	Princess St / Smith St	TWSC	SBL	1	40	40	1	13	B	17.0	C	3.2	A
50	Princess St / Smith St	TWSC	SBR	5	40	40	6	17	C				
50	Princess St / Smith St	TWSC	EBL	40	40	60	1	2	A				
50	Princess St / Smith St	TWSC	EBT	594	40	60	0	1	A				
50	Princess St / Smith St	TWSC	WBT	334	5	45	4	7	A				
50	Princess St / Smith St	TWSC	WBR	3	5	45	0	0	A				
60	Princess St / Victoria St	Signalized	NBL	7	20	45	20	28	C	31.0	C	11.7	B
60	Princess St / Victoria St	Signalized	NBT	93	20	45	17	23	C				
60	Princess St / Victoria St	Signalized	NBR	56	20	45	10	17	B				
60	Princess St / Victoria St	Signalized	SBL	75	20	35	22	31	C				
60	Princess St / Victoria St	Signalized	SBT	49	20	35	20	29	C				
60	Princess St / Victoria St	Signalized	SBR	1	20	35	0	0	A				
60	Princess St / Victoria St	Signalized	EBL	23	15	90	11	16	B				
60	Princess St / Victoria St	Signalized	EBT	554	15	90	1	5	A				
60	Princess St / Victoria St	Signalized	EBR	21	15	90	1	5	A				
60	Princess St / Victoria St	Signalized	WBL	16	45	95	15	20	B				
60	Princess St / Victoria St	Signalized	WBT	339	45	95	7	11	B				
60	Princess St / Victoria St	Signalized	WBR	164	45	95	6	12	B				
70	Princess St / Nelson St	TWSC	NBL	19	5	45	8	20	C	20.0	C	3.9	A
70	Princess St / Nelson St	TWSC	NBT	2	5	45	1	12	B				
70	Princess St / Nelson St	TWSC	NBR	6	5	45	1	13	B				
70	Princess St / Nelson St	TWSC	SBL	0	0	5	0	0	A				
70	Princess St / Nelson St	TWSC	SBT	5	0	5	9	19	C				
70	Princess St / Nelson St	TWSC	SBR	0	0	5	0	0	A				
70	Princess St / Nelson St	TWSC	EBL	82	0	70	4	9	A				
70	Princess St / Nelson St	TWSC	EBT	609	0	70	1	3	A				
70	Princess St / Nelson St	TWSC	EBR	9	0	70	1	3	A				
70	Princess St / Nelson St	TWSC	WBL	27	25	70	6	10	A				
70	Princess St / Nelson St	TWSC	WBT	511	25	70	1	3	A				
70	Princess St / Nelson St	TWSC	WBR	2	25	70	0	7	A				

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Measures of Effectiveness Details



Node	Location	Control	Mvmt.	Volume (All)	Queue (m)		Stop Delay (s)	Delay (s)	LOS	Critical Mvmt		Intersection	
					50th	95th				Delay	LOS	Delay	LOS
80	Princess St / Albert St	Signalized	NBL	57	10	35	14	20	B	33.0	C	14.2	B
80	Princess St / Albert St	Signalized	NBT	11	10	35	12	18	B				
80	Princess St / Albert St	Signalized	NBR	49	10	35	5	10	A				
80	Princess St / Albert St	Signalized	SBL	3	5	30	15	27	C				
80	Princess St / Albert St	Signalized	SBT	30	5	30	14	18	B				
80	Princess St / Albert St	Signalized	SBR	101	5	30	2	7	A				
80	Princess St / Albert St	Signalized	EBL	32	50	95	23	33	C				
80	Princess St / Albert St	Signalized	EBT	578	50	95	11	16	B				
80	Princess St / Albert St	Signalized	EBR	13	50	95	6	13	B				
80	Princess St / Albert St	Signalized	WBL	8	20	45	18	23	C				
80	Princess St / Albert St	Signalized	WBT	391	20	45	7	11	B				
80	Princess St / Albert St	Signalized	WBR	11	20	45	9	15	B				
90	Princess St / Frontenac St	TWSC	NBL	1	0	20	0	0	A	19.0	C	2.1	A
90	Princess St / Frontenac St	TWSC	NBT	12	0	20	9	19	C				
90	Princess St / Frontenac St	TWSC	NBR	2	0	20	0	0	A				
90	Princess St / Frontenac St	TWSC	SBL	0	0	0	0	0	A				
90	Princess St / Frontenac St	TWSC	SBT	0	0	0	0	0	A				
90	Princess St / Frontenac St	TWSC	SBR	1	0	0	0	8	A				
90	Princess St / Frontenac St	TWSC	EBL	84	5	85	1	4	A				
90	Princess St / Frontenac St	TWSC	EBT	547	5	85	1	3	A				
90	Princess St / Frontenac St	TWSC	EBR	1	5	85	0	0	A				
90	Princess St / Frontenac St	TWSC	WBL	5	0	0	1	3	A				
90	Princess St / Frontenac St	TWSC	WBT	407	0	0	0	0	A				
90	Princess St / Frontenac St	TWSC	WBR	2	0	0	0	0	A				
100	Princess St / Alfred St	Signalized	NBL	58	30	55	13	20	B	36.0	D	24.4	C
100	Princess St / Alfred St	Signalized	NBT	132	30	55	12	19	B				
100	Princess St / Alfred St	Signalized	NBR	118	30	55	9	14	B				
100	Princess St / Alfred St	Signalized	SBL	73	15	30	17	25	C				
100	Princess St / Alfred St	Signalized	SBT	44	15	30	15	24	C				
100	Princess St / Alfred St	Signalized	SBR	23	15	30	8	14	B				
100	Princess St / Alfred St	Signalized	EBL	40	75	100	26	36	D				
100	Princess St / Alfred St	Signalized	EBT	495	75	100	20	28	C				
100	Princess St / Alfred St	Signalized	EBR	28	75	100	16	24	C				
100	Princess St / Alfred St	Signalized	WBL	59	50	90	13	20	B				
100	Princess St / Alfred St	Signalized	WBT	333	50	90	20	26	C				
100	Princess St / Alfred St	Signalized	WBR	23	50	90	15	22	C				
110	Princess St / Chatham St	TWSC	SBL	1	0	5	0	0	A	19.0	C	3.2	A
110	Princess St / Chatham St	TWSC	SBR	12	0	5	3	19	C				
110	Princess St / Chatham St	TWSC	EBL	119	15	75	1	5	A				
110	Princess St / Chatham St	TWSC	EBT	567	15	75	1	4	A				
110	Princess St / Chatham St	TWSC	WBT	399	10	65	0	1	A				
110	Princess St / Chatham St	TWSC	WBR	43	10	65	1	3	A				
120	Princess St / University Av	Signalized	NBL	95	10	25	18	24	C	24.0	C	8.4	A
120	Princess St / University Av	Signalized	NBR	5	10	25	5	10	A				
120	Princess St / University Av	Signalized	EBT	501	35	70	3	7	A				
120	Princess St / University Av	Signalized	EBR	49	35	70	2	5	A				
120	Princess St / University Av	Signalized	WBL	21	10	45	10	15	B				
120	Princess St / University Av	Signalized	WBT	336	10	45	3	6	A				
130	Princess St / Division St	Signalized	NBL	74	25	45	14	23	C	27.0	C	15.9	B
130	Princess St / Division St	Signalized	NBT	185	25	45	13	19	B				
130	Princess St / Division St	Signalized	NBR	11	25	45	6	11	B				
130	Princess St / Division St	Signalized	SBL	145	15	70	9	14	B				
130	Princess St / Division St	Signalized	SBT	117	15	70	4	6	A				
130	Princess St / Division St	Signalized	SBR	283	15	70	0	1	A				
130	Princess St / Division St	Signalized	EBL	85	30	50	19	27	C				
130	Princess St / Division St	Signalized	EBT	366	30	50	19	26	C				
130	Princess St / Division St	Signalized	EBR	58	30	50	7	15	B				

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Measures of Effectiveness Details



Node	Location	Control	Mvmt.	Volume (All)	Queue (m)		Stop Delay (s)	Delay (s)	LOS	Critical Mvmt		Intersection	
					50th	95th				Delay	LOS	Delay	LOS
140	Concession St / Drayton Av	TWSC	NBR	5	35	60	1040	1061	F	1061.0	F	58.0	F
140	Concession St / Drayton Av	TWSC	EBT	1,176	320	320	24	54	F				
140	Concession St / Drayton Av	TWSC	EBR	51	320	320	27	51	F				
150	Concession St / Leroy Grant Dr (S)	TWSC	SBL	21	0	10	15	28	D	48.0	E	33.2	D
150	Concession St / Leroy Grant Dr (S)	TWSC	EBL	162	75	75	32	48	E				
150	Concession St / Leroy Grant Dr (S)	TWSC	EBT	1,026	75	75	16	31	D				
155	Concession St / Leroy Grant Drive (N)	TWSC	NBL	78	45	50	26	44	E	49.0	E	5.2	A
155	Concession St / Leroy Grant Drive (N)	TWSC	NBT	84	45	50	30	49	E				
155	Concession St / Leroy Grant Drive (N)	TWSC	SBT	21	5	5	15	26	D				
155	Concession St / Leroy Grant Drive (N)	TWSC	SBR	5	5	5	0	0	A				
155	Concession St / Leroy Grant Drive (N)	TWSC	WBT	1,326	0	0	0	0	A				
155	Concession St / Leroy Grant Drive (N)	TWSC	WBR	41	0	0	0	1	A				
160	Concession St / Macdonnell St	Signalized	NBL	249	45	80	27	36	D	60.0	E	16.8	B
160	Concession St / Macdonnell St	Signalized	NBT	24	45	80	29	36	D				
160	Concession St / Macdonnell St	Signalized	NBR	29	45	80	24	32	C				
160	Concession St / Macdonnell St	Signalized	SBR	71	5	20	10	15	B				
160	Concession St / Macdonnell St	Signalized	EBL	55	75	80	49	60	E				
160	Concession St / Macdonnell St	Signalized	EBT	885	75	80	8	13	B				
160	Concession St / Macdonnell St	Signalized	EBR	116	75	80	7	12	B				
160	Concession St / Macdonnell St	Signalized	WBL	29	85	90	42	52	D				
160	Concession St / Macdonnell St	Signalized	WBT	1,053	85	90	8	12	B				
160	Concession St / Macdonnell St	Signalized	WBR	0	85	90	0	0	A				
170	Concession St / Connaught St	TWSC	SBL	0	0	5	0	0	A	33.0	D	8.4	A
170	Concession St / Connaught St	TWSC	SBR	15	0	5	21	33	D				
170	Concession St / Connaught St	TWSC	EBL	0	35	95	0	0	A				
170	Concession St / Connaught St	TWSC	EBT	909	35	95	2	5	A				
170	Concession St / Connaught St	TWSC	WBT	1,067	115	115	7	11	B				
170	Concession St / Connaught St	TWSC	WBR	0	115	115	0	0	A				
180	Concession St / Victoria St	Signalized	NBL	29	20	45	34	46	D	46.0	D	17.0	B
180	Concession St / Victoria St	Signalized	NBT	49	20	45	26	34	C				
180	Concession St / Victoria St	Signalized	NBR	75	20	45	18	27	C				
180	Concession St / Victoria St	Signalized	SBL	3	0	10	24	32	C				
180	Concession St / Victoria St	Signalized	SBT	22	0	10	24	29	C				
180	Concession St / Victoria St	Signalized	SBR	36	0	10	9	22	C				
180	Concession St / Victoria St	Signalized	EBL	21	115	115	30	39	D				
180	Concession St / Victoria St	Signalized	EBT	806	115	115	8	14	B				
180	Concession St / Victoria St	Signalized	EBR	92	115	115	7	13	B				
180	Concession St / Victoria St	Signalized	WBL	40	90	95	25	33	C				
180	Concession St / Victoria St	Signalized	WBT	1,000	90	95	10	16	B				
180	Concession St / Victoria St	Signalized	WBR	16	90	95	0	1	A				
190	Concession St / Nelson St	TWSC	NBL	7	0	5	202	221	F	221.0	F	9.8	A
190	Concession St / Nelson St	TWSC	NBT	0	0	5	0	0	A				
190	Concession St / Nelson St	TWSC	NBR	7	0	5	3	9	A				
190	Concession St / Nelson St	TWSC	SBL	0	0	5	0	0	A				
190	Concession St / Nelson St	TWSC	SBT	0	0	5	0	0	A				
190	Concession St / Nelson St	TWSC	SBR	12	0	5	0	6	A				
190	Concession St / Nelson St	TWSC	EBL	0	0	85	0	0	A				
190	Concession St / Nelson St	TWSC	EBT	813	0	85	1	2	A				
190	Concession St / Nelson St	TWSC	EBR	69	0	85	1	3	A				
190	Concession St / Nelson St	TWSC	WBL	13	95	100	5	12	B				
190	Concession St / Nelson St	TWSC	WBT	1,029	95	100	9	15	B				
190	Concession St / Nelson St	TWSC	WBR	0	95	100	0	0	A				



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Measures of Effectiveness Details

Node	Location	Control	Mvmt.	Volume (All)	Queue (m)		Stop Delay (s)	Delay (s)	LOS	Critical Mvmt		Intersection	
					50th	95th				Delay	LOS	Delay	LOS
200	Concession St / Kingscourt Av	TWSC	SBL	0	0	15	0	0	A	46.0	E	9.4	A
200	Concession St / Kingscourt Av	TWSC	SBR	16	0	15	31	46	E				
200	Concession St / Kingscourt Av	TWSC	EBL	2	0	95	33	41	E				
200	Concession St / Kingscourt Av	TWSC	EBT	807	0	95	2	4	A				
200	Concession St / Kingscourt Av	TWSC	WBT	1,027	95	95	8	13	B				
200	Concession St / Kingscourt Av	TWSC	WBR	0	95	95	0	0	A				
210	Concession St / Fergus St	TWSC	SBL	11	0	10	76	89	F	89.0	F	10.8	B
210	Concession St / Fergus St	TWSC	SBR	0	0	10	0	0	A				
210	Concession St / Fergus St	TWSC	EBL	0	0	100	0	0	A				
210	Concession St / Fergus St	TWSC	EBT	803	0	100	4	7	A				
210	Concession St / Fergus St	TWSC	WBT	1,030	100	100	7	13	B				
210	Concession St / Fergus St	TWSC	WBR	4	100	100	0	2	A				
220	Concession St / Grey St	TWSC	SBL	0	0	5	0	0	A	25.0	C	9.3	A
220	Concession St / Grey St	TWSC	SBR	15	0	5	14	25	C				
220	Concession St / Grey St	TWSC	EBL	0	65	105	0	0	A				
220	Concession St / Grey St	TWSC	EBT	816	65	105	11	17	C				
220	Concession St / Grey St	TWSC	WBT	1,019	40	60	2	3	A				
220	Concession St / Grey St	TWSC	WBR	5	40	60	1	4	A				
230	Concession St / Alfred St	Signalized	NBL	266	95	215	60	79	E	84.0	F	28.0	C
230	Concession St / Alfred St	Signalized	NBT	34	95	215	65	84	F				
230	Concession St / Alfred St	Signalized	NBR	26	95	215	52	72	E				
230	Concession St / Alfred St	Signalized	SBL	0	5	15	0	0	A				
230	Concession St / Alfred St	Signalized	SBT	36	5	15	16	21	C				
230	Concession St / Alfred St	Signalized	SBR	21	5	15	8	13	B				
230	Concession St / Alfred St	Signalized	EBL	22	55	60	25	33	C				
230	Concession St / Alfred St	Signalized	EBT	482	55	60	12	16	B				
230	Concession St / Alfred St	Signalized	EBR	316	55	60	3	5	A				
230	Concession St / Alfred St	Signalized	WBL	47	105	145	16	26	C				
230	Concession St / Alfred St	Signalized	WBT	740	105	145	15	24	C				
230	Concession St / Alfred St	Signalized	WBR	0	105	145	0	0	A				
240	Concession St / Lansdowne St	TWSC	NBL	3	0	5	13	21	C	21.0	C	3.8	A
240	Concession St / Lansdowne St	TWSC	NBR	17	0	5	2	15	B				
240	Concession St / Lansdowne St	TWSC	EBT	464	0	0	0	1	A				
240	Concession St / Lansdowne St	TWSC	EBR	0	0	0	0	0	A				
240	Concession St / Lansdowne St	TWSC	WBL	43	0	120	3	6	A				
240	Concession St / Lansdowne St	TWSC	WBT	762	0	120	2	5	A				
250	Concession St / Division St	Signalized	NBL	149	115	115	48	62	E	88.0	F	41.9	D
250	Concession St / Division St	Signalized	NBT	560	115	115	34	42	D				
250	Concession St / Division St	Signalized	NBR	13	115	115	31	39	D				
250	Concession St / Division St	Signalized	SBL	27	70	225	33	44	D				
250	Concession St / Division St	Signalized	SBT	465	70	225	18	25	C				
250	Concession St / Division St	Signalized	SBR	237	70	225	6	14	B				
250	Concession St / Division St	Signalized	EBL	225	40	90	22	30	C				
250	Concession St / Division St	Signalized	EBT	207	40	90	12	17	B				
250	Concession St / Division St	Signalized	EBR	35	40	90	4	6	A				
250	Concession St / Division St	Signalized	WBL	43	205	210	73	88	F				
250	Concession St / Division St	Signalized	WBT	396	205	210	71	85	F				
250	Concession St / Division St	Signalized	WBR	33	205	210	70	86	F				



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Measures of Effectiveness Details



Node	Location	Control	Mvmt.	Volume (All)	Queue (m)		Stop Delay (s)	Delay (s)	LOS	Critical Mvmt		Intersection	
					50th	95th				Delay	LOS	Delay	LOS
260	Adelaide St / Division St	TWSC	NBL	0	110	110	0	0	A	475.0	F	24.6	C
260	Adelaide St / Division St	TWSC	NBT	702	110	110	24	32	D				
260	Adelaide St / Division St	TWSC	NBR	0	110	110	0	0	A				
260	Adelaide St / Division St	TWSC	SBL	0	0	70	0	0	A				
260	Adelaide St / Division St	TWSC	SBT	427	0	70	0	2	A				
260	Adelaide St / Division St	TWSC	SBR	115	0	70	0	1	A				
260	Adelaide St / Division St	TWSC	EBL	16	5	60	458	475	F				
260	Adelaide St / Division St	TWSC	EBT	0	5	60	0	0	A				
260	Adelaide St / Division St	TWSC	EBR	0	5	60	0	0	A				
260	Adelaide St / Division St	TWSC	WBL	8	0	5	19	29	D				
260	Adelaide St / Division St	TWSC	WBT	3	0	5	0	0	A				
260	Adelaide St / Division St	TWSC	WBR	0	0	5	0	0	A				
270	Stanley St / Division St	TWSC	NBL	0	75	75	0	0	A	40.0	E	13.1	B
270	Stanley St / Division St	TWSC	NBT	692	75	75	12	19	C				
270	Stanley St / Division St	TWSC	SBT	377	0	25	1	3	A				
270	Stanley St / Division St	TWSC	SBR	56	0	25	1	2	A				
270	Stanley St / Division St	TWSC	EBL	14	0	5	30	40	E				
270	Stanley St / Division St	TWSC	EBR	0	0	5	0	0	A				
280	Pine St / Division St	Signalized	NBL	40	75	80	15	22	C	45.0	D	21.4	C
280	Pine St / Division St	Signalized	NBT	622	75	80	17	24	C				
280	Pine St / Division St	Signalized	NBR	0	75	80	0	0	A				
280	Pine St / Division St	Signalized	SBL	28	25	70	19	25	C				
280	Pine St / Division St	Signalized	SBT	339	25	70	6	10	A				
280	Pine St / Division St	Signalized	SBR	13	25	70	4	7	A				
280	Pine St / Division St	Signalized	EBL	5	10	30	16	24	C				
280	Pine St / Division St	Signalized	EBT	43	10	30	25	31	C				
280	Pine St / Division St	Signalized	EBR	35	10	30	7	13	B				
280	Pine St / Division St	Signalized	WBL	6	15	45	34	43	D				
280	Pine St / Division St	Signalized	WBT	46	15	45	35	45	D				
280	Pine St / Division St	Signalized	WBR	65	15	45	27	37	D				
290	Quebec St / Division St	TWSC	NBT	664	65	85	7	11	B	20.0	C	7.9	A
290	Quebec St / Division St	TWSC	NBR	0	65	85	0	0	A				
290	Quebec St / Division St	TWSC	SBL	0	0	80	0	0	A				
290	Quebec St / Division St	TWSC	SBT	376	0	80	1	2	A				
290	Quebec St / Division St	TWSC	WBL	14	0	5	13	20	C				
290	Quebec St / Division St	TWSC	WBR	0	0	5	0	0	A				
300	York St / Division St	Signalized	NBL	1	35	35	0	2	A	31.0	C	9.8	A
300	York St / Division St	Signalized	NBT	625	35	35	5	7	A				
300	York St / Division St	Signalized	NBR	6	35	35	0	0	A				
300	York St / Division St	Signalized	SBL	36	20	65	16	22	C				
300	York St / Division St	Signalized	SBT	358	20	65	5	7	A				
300	York St / Division St	Signalized	SBR	0	20	65	0	0	A				
300	York St / Division St	Signalized	EBL	0	5	15	0	0	A				
300	York St / Division St	Signalized	EBT	33	5	15	25	29	C				
300	York St / Division St	Signalized	EBR	1	5	15	0	0	A				
300	York St / Division St	Signalized	WBL	38	10	30	21	27	C				
300	York St / Division St	Signalized	WBT	26	10	30	23	31	C				
300	York St / Division St	Signalized	WBR	40	10	30	13	23	C				
310	Main St / Division St	TWSC	NBT	628	55	60	12	18	C	31.0	D	11.1	B
310	Main St / Division St	TWSC	NBR	0	55	60	0	0	A				
310	Main St / Division St	TWSC	SBL	0	35	40	0	0	A				
310	Main St / Division St	TWSC	SBT	394	35	40	0	0	A				
310	Main St / Division St	TWSC	WBL	8	0	5	5	13	B				
310	Main St / Division St	TWSC	WBR	2	0	5	19	31	D				
320	Hamilton St / Division St	TWSC	NBL	14	110	110	12	20	C	30.0	D	18.0	C
320	Hamilton St / Division St	TWSC	NBT	627	110	110	20	30	D				
320	Hamilton St / Division St	TWSC	SBT	378	0	0	0	0	A				
320	Hamilton St / Division St	TWSC	SBR	29	0	0	0	0	A				
320	Hamilton St / Division St	TWSC	EBL	0	0	5	0	0	A				
320	Hamilton St / Division St	TWSC	EBR	18	0	5	1	8	A				



Williamsville Operational Analysis

2036 No Mitigation - Ultimate Growth, 22% Auto M.S. - PM Peak

Measures of Effectiveness Details

Node	Location	Control	Mvmt.	Volume (All)	Queue (m)		Stop Delay (s)	Delay (s)	LOS	Critical Mvmt		Intersection	
					50th	95th				Delay	LOS	Delay	LOS
330	Raglan St / Division St	TWSC	NBT	624	40	60	7	9	A	26.0	D	6.2	A
330	Raglan St / Division St	TWSC	NBR	14	40	60	7	12	B				
330	Raglan St / Division St	TWSC	SBL	5	0	0	2	7	A				
330	Raglan St / Division St	TWSC	SBT	391	0	0	0	0	A				
330	Raglan St / Division St	TWSC	WBL	29	5	10	7	16	C				
330	Raglan St / Division St	TWSC	WBR	15	5	10	16	26	D				
340	Elm St / Division St	TWSC	NBL	124	25	60	6	10	A	37.0	E	7.2	A
340	Elm St / Division St	TWSC	NBT	625	25	60	7	10	A				
340	Elm St / Division St	TWSC	SBT	370	0	35	0	1	A				
340	Elm St / Division St	TWSC	SBR	49	0	35	1	2	A				
340	Elm St / Division St	TWSC	EBL	13	5	10	26	37	E				
340	Elm St / Division St	TWSC	EBR	11	5	10	8	16	C				
350	Ellice St / Division St	TWSC	NBT	737	15	55	3	5	A	22.0	C	3.9	A
350	Ellice St / Division St	TWSC	NBR	5	15	55	4	5	A				
350	Ellice St / Division St	TWSC	SBL	2	0	0	5	8	A				
350	Ellice St / Division St	TWSC	SBT	377	0	0	0	1	A				
350	Ellice St / Division St	TWSC	WBL	0	0	5	0	0	A				
350	Ellice St / Division St	TWSC	WBR	13	0	5	12	22	C				
360	Colborne St / Division St	TWSC	NBL	44	20	260	5	9	A	33.0	D	6.9	A
360	Colborne St / Division St	TWSC	NBT	712	20	260	5	8	A				
360	Colborne St / Division St	TWSC	NBR	0	20	260	0	0	A				
360	Colborne St / Division St	TWSC	SBL	5	0	35	5	7	A				
360	Colborne St / Division St	TWSC	SBT	372	0	35	2	3	A				
360	Colborne St / Division St	TWSC	SBR	0	0	35	0	0	A				
360	Colborne St / Division St	TWSC	EBL	11	5	10	23	33	D				
360	Colborne St / Division St	TWSC	EBT	2	5	10	12	22	C				
360	Colborne St / Division St	TWSC	EBR	14	5	10	5	14	B				
360	Colborne St / Division St	TWSC	WBL	0	0	5	0	0	A				
360	Colborne St / Division St	TWSC	WBT	0	0	5	0	0	A				
360	Colborne St / Division St	TWSC	WBR	14	0	5	7	16	C				
370	Queen St / Division St	Signalized	NBT	185	10	65	12	16	B	30.0	C	23.6	C
370	Queen St / Division St	Signalized	NBR	83	10	65	4	11	B				
370	Queen St / Division St	Signalized	SBL	107	50	80	17	25	C				
370	Queen St / Division St	Signalized	SBT	279	50	80	15	22	C				
370	Queen St / Division St	Signalized	WBL	265	50	180	12	20	B				
370	Queen St / Division St	Signalized	WBR	571	50	180	14	30	C				



Williamsville Operational Analysis

2036 No Mitigation - Ultimate Growth, 35% Auto M.S. - AM Peak

Measures of Effectiveness Details

ID	Intersection Name	Control Type	Number of Vehicles	50th %ile Queue (m)	95th %ile Queue (m)	Avg. Vehicle Delay (sec)	Avg. Stop Delay (sec)	LOS
10	Princess St / Concession St	Signalized	2,976	46.6	73.8	28.3	22.7	C
20	Princess St / Regent St	TWSC	1,395	12.2	74.2	5.3	1.8	-
30	Princess St / Drayton Av	TWSC	1,349	18.1	64.2	3.2	0.8	-
40	Princess St / Macdonnell Av	Signalized	1,294	72.9	136.0	16.5	11.0	B
50	Princess St / Smith St	TWSC	1,091	30.5	60.2	3.6	1.6	-
60	Princess St / Victoria St	Signalized	1,345	29.4	104.5	11.1	6.5	B
70	Princess St / Nelson St	TWSC	1,266	6.3	92.0	4.8	1.5	-
80	Princess St / Albert St	Signalized	1,232	39.5	84.7	15.7	10.5	B
90	Princess St / Frontenac St	TWSC	1,117	0.0	56.2	2.9	0.1	-
100	Princess St / Alfred St	Signalized	1,461	50.0	101.0	24.0	16.6	C
110	Princess St / Chatham St	TWSC	1,026	0.2	46.0	2.2	0.1	-
120	Princess St / University Av	Signalized	930	22.3	58.9	6.1	2.9	A
130	Princess St / Division St	Signalized	1,145	19.6	52.1	16.3	11.1	B
140	Concession St / Drayton Av	TWSC	961	0.0	158.1	9.0	4.9	-
150	Concession St / Leroy Grant Dr (S)	TWSC	937	69.4	74.4	8.9	4.8	-
155	Concession St / Leroy Grant Drive (N)	TWSC	715	0.3	0.9	0.8	0.2	-
160	Concession St / Macdonnell St	Signalized	1,582	53.6	76.5	15.6	10.9	B
170	Concession St / Connaught St	TWSC	1,298	0.0	102.3	4.9	3.3	-
180	Concession St / Victoria St	Signalized	1,390	35.6	81.8	12.9	8.4	B
190	Concession St / Nelson St	TWSC	1,272	0.1	86.2	3.9	2.3	-
200	Concession St / Kingscourt Av	TWSC	1,237	0.2	56.9	4.5	2.4	-
210	Concession St / Fergus St	TWSC	1,247	0.2	66.7	7.0	3.8	-
220	Concession St / Grey St	TWSC	1,280	27.8	59.5	12.1	7.7	-
230	Concession St / Alfred St	Signalized	1,378	43.4	69.0	12.1	7.6	B
240	Concession St / Lansdowne St	TWSC	1,048	0.0	8.2	0.6	0.0	-
250	Concession St / Division St	Signalized	1,830	46.5	107.1	23.4	16.9	C
260	Adelaide St / Division St	TWSC	772	0.0	21.9	0.2	0.0	-
270	Stanley St / Division St	TWSC	709	0.5	14.8	2.0	0.2	-
280	Pine St / Division St	Signalized	787	13.0	47.1	8.8	5.1	A
290	Quebec St / Division St	TWSC	682	0.0	32.6	0.9	0.0	-
300	York St / Division St	Signalized	770	15.2	41.8	7.4	4.7	A
310	Main St / Division St	TWSC	652	23.1	29.7	0.8	0.3	-
320	Hamilton St / Division St	TWSC	640	0.1	0.1	0.2	0.0	-
330	Raglan St / Division St	TWSC	645	0.2	0.2	0.4	0.0	-
340	Elm St / Division St	TWSC	628	0.0	0.1	0.2	0.1	-
350	Ellice St / Division St	TWSC	610	0.0	0.1	0.2	0.1	-
360	Colborne St / Division St	TWSC	628	0.3	22.2	1.4	0.7	-
370	Queen St / Division St	Signalized	906	31.0	52.5	15.8	9.6	B
<b>Total</b>			<b>42,231</b>	<b>708</b>	<b>2,215</b>	<b>294</b>	<b>181</b>	



Williamsville Operational Analysis

2036 No Mitigation - Ultimate Growth, 35% Auto M.S. - AM Peak

Measures of Effectiveness Details

Node	Location	Control	Mvmt.	Volume (All)	Queue (m)		Stop Delay (s)	Delay (s)	LOS	Critical Mvmt		Intersection	
					50th	95th				Delay	LOS	Delay	LOS
10	Princess St / Concession St	Signalized	NBL	191	40	60	37	44	D	45.0	D	28.3	C
10	Princess St / Concession St	Signalized	NBT	242	40	60	37	45	D				
10	Princess St / Concession St	Signalized	NBR	50	40	60	3	5	A				
10	Princess St / Concession St	Signalized	SBL	528	75	105	31	38	D				
10	Princess St / Concession St	Signalized	SBT	577	75	105	31	40	D				
10	Princess St / Concession St	Signalized	SBR	32	75	105	17	22	C				
10	Princess St / Concession St	Signalized	EBT	408	30	65	25	31	C				
10	Princess St / Concession St	Signalized	EBR	277	30	65	1	2	A				
10	Princess St / Concession St	Signalized	WBT	245	20	40	24	30	C				
10	Princess St / Concession St	Signalized	WBR	341	20	40	0	0	A				
10	Princess St / Concession St	Signalized	WBL	85	20	40	1	4	A				
20	Princess St / Regent St	TWSC	NBL	1	5	10	0	0	A	17.0	C	5.3	A
20	Princess St / Regent St	TWSC	NBR	34	5	10	8	17	C				
20	Princess St / Regent St	TWSC	EBT	788	20	95	2	7	A				
20	Princess St / Regent St	TWSC	EBR	51	20	95	1	3	A				
20	Princess St / Regent St	TWSC	WBL	9	0	45	8	11	B				
20	Princess St / Regent St	TWSC	WBT	512	0	45	1	2	A				
30	Princess St / Drayton Av	TWSC	SBL	2	0	45	11	28	D	28.0	D	3.2	A
30	Princess St / Drayton Av	TWSC	SBR	6	0	45	3	16	C				
30	Princess St / Drayton Av	TWSC	EBL	118	30	80	3	7	A				
30	Princess St / Drayton Av	TWSC	EBT	696	30	80	1	4	A				
30	Princess St / Drayton Av	TWSC	WBT	516	0	40	0	1	A				
30	Princess St / Drayton Av	TWSC	WBR	11	0	40	0	1	A				
40	Princess St / Macdonnell Av	Signalized	NBL	46	5	40	12	18	B	32.0	C	16.5	B
40	Princess St / Macdonnell Av	Signalized	NBT	25	5	40	13	18	B				
40	Princess St / Macdonnell Av	Signalized	NBR	22	5	40	7	13	B				
40	Princess St / Macdonnell Av	Signalized	SBL	8	40	40	9	15	B				
40	Princess St / Macdonnell Av	Signalized	SBT	18	40	40	12	16	B				
40	Princess St / Macdonnell Av	Signalized	SBR	63	40	40	3	8	A				
40	Princess St / Macdonnell Av	Signalized	EBL	29	100	210	25	32	C				
40	Princess St / Macdonnell Av	Signalized	EBT	633	100	210	12	19	B				
40	Princess St / Macdonnell Av	Signalized	EBR	32	100	210	9	15	B				
40	Princess St / Macdonnell Av	Signalized	WBL	0	50	55	0	0	A				
40	Princess St / Macdonnell Av	Signalized	WBT	413	50	55	10	13	B				
40	Princess St / Macdonnell Av	Signalized	WBR	5	50	55	10	14	B				
50	Princess St / Smith St	TWSC	SBL	2	40	40	3	17	C	19.0	C	3.6	A
50	Princess St / Smith St	TWSC	SBR	17	40	40	6	19	C				
50	Princess St / Smith St	TWSC	EBL	7	40	45	0	2	A				
50	Princess St / Smith St	TWSC	EBT	649	40	45	0	1	A				
50	Princess St / Smith St	TWSC	WBT	402	15	85	4	7	A				
50	Princess St / Smith St	TWSC	WBR	14	15	85	2	3	A				
60	Princess St / Victoria St	Signalized	NBL	38	15	40	22	31	C	31.0	C	11.1	B
60	Princess St / Victoria St	Signalized	NBT	29	15	40	16	23	C				
60	Princess St / Victoria St	Signalized	NBR	47	15	40	10	18	B				
60	Princess St / Victoria St	Signalized	SBL	16	5	20	19	26	C				
60	Princess St / Victoria St	Signalized	SBT	49	5	20	20	25	C				
60	Princess St / Victoria St	Signalized	SBR	0	5	20	0	0	A				
60	Princess St / Victoria St	Signalized	EBL	5	30	135	9	17	B				
60	Princess St / Victoria St	Signalized	EBT	643	30	135	4	9	A				
60	Princess St / Victoria St	Signalized	EBR	12	30	135	3	9	A				
60	Princess St / Victoria St	Signalized	WBL	38	35	90	12	17	B				
60	Princess St / Victoria St	Signalized	WBT	380	35	90	6	9	A				
60	Princess St / Victoria St	Signalized	WBR	88	35	90	3	7	A				
70	Princess St / Nelson St	TWSC	NBL	4	35	45	13	25	C	27.0	D	4.8	A
70	Princess St / Nelson St	TWSC	NBT	11	35	45	11	27	D				
70	Princess St / Nelson St	TWSC	NBR	11	35	45	5	16	C				
70	Princess St / Nelson St	TWSC	SBL	10	0	5	13	25	C				
70	Princess St / Nelson St	TWSC	SBT	0	0	5	0	0	A				
70	Princess St / Nelson St	TWSC	SBR	11	0	5	3	17	C				
70	Princess St / Nelson St	TWSC	EBL	82	10	105	3	8	A				
70	Princess St / Nelson St	TWSC	EBT	617	10	105	1	5	A				
70	Princess St / Nelson St	TWSC	EBR	9	10	105	2	7	A				
70	Princess St / Nelson St	TWSC	WBL	16	0	80	8	13	B				
70	Princess St / Nelson St	TWSC	WBT	492	0	80	1	2	A				
70	Princess St / Nelson St	TWSC	WBR	3	0	80	0	3	A				

Williamsville Operational Analysis

2036 No Mitigation - Ultimate Growth, 35% Auto M.S. - AM Peak

Measures of Effectiveness Details



Node	Location	Control	Mvmt.	Volume (All)	Queue (m)		Stop Delay (s)	Delay (s)	LOS	Critical Mvmt		Intersection	
					50th	95th				Delay	LOS	Delay	LOS
80	Princess St / Albert St	Signalized	NBL	20	5	15	16	23	C	32.0	C	15.7	B
80	Princess St / Albert St	Signalized	NBT	7	5	15	14	20	B				
80	Princess St / Albert St	Signalized	NBR	36	5	15	2	7	A				
80	Princess St / Albert St	Signalized	SBL	10	5	35	9	19	B				
80	Princess St / Albert St	Signalized	SBT	31	5	35	7	9	A				
80	Princess St / Albert St	Signalized	SBR	58	5	35	1	8	A				
80	Princess St / Albert St	Signalized	EBL	2	55	120	23	32	C				
80	Princess St / Albert St	Signalized	EBT	609	55	120	14	20	B				
80	Princess St / Albert St	Signalized	EBR	21	55	120	16	22	C				
80	Princess St / Albert St	Signalized	WBL	5	30	55	18	26	C				
80	Princess St / Albert St	Signalized	WBT	432	30	55	7	11	B				
80	Princess St / Albert St	Signalized	WBR	1	30	55	0	0	A				
90	Princess St / Frontenac St	TWSC	NBL	1	0	20	1	7	A	25.0	C	2.9	A
90	Princess St / Frontenac St	TWSC	NBT	1	0	20	15	25	C				
90	Princess St / Frontenac St	TWSC	NBR	2	0	20	3	10	A				
90	Princess St / Frontenac St	TWSC	SBL	0	0	5	0	0	A				
90	Princess St / Frontenac St	TWSC	SBT	0	0	5	0	0	A				
90	Princess St / Frontenac St	TWSC	SBR	7	0	5	1	8	A				
90	Princess St / Frontenac St	TWSC	EBL	44	0	95	1	4	A				
90	Princess St / Frontenac St	TWSC	EBT	611	0	95	0	4	A				
90	Princess St / Frontenac St	TWSC	EBR	5	0	95	0	3	A				
90	Princess St / Frontenac St	TWSC	WBL	13	0	0	2	4	A				
90	Princess St / Frontenac St	TWSC	WBT	431	0	0	0	1	A				
90	Princess St / Frontenac St	TWSC	WBR	2	0	0	0	0	A				
100	Princess St / Alfred St	Signalized	NBL	66	25	50	17	24	C	29.0	C	24.0	C
100	Princess St / Alfred St	Signalized	NBT	95	25	50	16	23	C				
100	Princess St / Alfred St	Signalized	NBR	86	25	50	8	16	B				
100	Princess St / Alfred St	Signalized	SBL	33	30	75	18	27	C				
100	Princess St / Alfred St	Signalized	SBT	143	30	75	14	21	C				
100	Princess St / Alfred St	Signalized	SBR	103	30	75	7	13	B				
100	Princess St / Alfred St	Signalized	EBL	14	75	140	22	29	C				
100	Princess St / Alfred St	Signalized	EBT	563	75	140	20	28	C				
100	Princess St / Alfred St	Signalized	EBR	27	75	140	13	20	B				
100	Princess St / Alfred St	Signalized	WBL	17	40	90	21	29	C				
100	Princess St / Alfred St	Signalized	WBT	295	40	90	18	25	C				
100	Princess St / Alfred St	Signalized	WBR	19	40	90	4	8	A				
110	Princess St / Chatham St	TWSC	SBL	0	5	5	0	0	A	15.0	B	2.2	A
110	Princess St / Chatham St	TWSC	SBR	40	5	5	1	15	B				
110	Princess St / Chatham St	TWSC	EBL	52	0	40	1	3	A				
110	Princess St / Chatham St	TWSC	EBT	630	0	40	0	2	A				
110	Princess St / Chatham St	TWSC	WBT	288	0	65	0	1	A				
110	Princess St / Chatham St	TWSC	WBR	16	0	65	0	0	A				
120	Princess St / University Av	Signalized	NBL	31	5	15	16	22	C	24.0	C	6.1	A
120	Princess St / University Av	Signalized	NBR	30	5	15	2	8	A				
120	Princess St / University Av	Signalized	EBT	528	30	75	2	5	A				
120	Princess St / University Av	Signalized	EBR	59	30	75	1	4	A				
120	Princess St / University Av	Signalized	WBL	10	10	35	17	24	C				
120	Princess St / University Av	Signalized	WBT	272	10	35	3	6	A				
130	Princess St / Division St	Signalized	NBL	58	5	25	11	21	C	28.0	C	16.3	B
130	Princess St / Division St	Signalized	NBT	52	5	25	11	17	B				
130	Princess St / Division St	Signalized	NBR	1	5	25	0	0	A				
130	Princess St / Division St	Signalized	SBL	149	5	55	4	6	A				
130	Princess St / Division St	Signalized	SBT	104	5	55	4	5	A				
130	Princess St / Division St	Signalized	SBR	224	5	55	0	1	A				
130	Princess St / Division St	Signalized	EBL	138	35	55	19	27	C				
130	Princess St / Division St	Signalized	EBT	377	35	55	20	28	C				
130	Princess St / Division St	Signalized	EBR	42	35	55	9	16	B				

Williamsville Operational Analysis

2036 No Mitigation - Ultimate Growth, 35% Auto M.S. - AM Peak

Measures of Effectiveness Details



Node	Location	Control	Mvmt.	Volume (All)	Queue (m)		Stop Delay (s)	Delay (s)	LOS	Critical Mvmt		Intersection	
					50th	95th				Delay	LOS	Delay	LOS
140	Concession St / Drayton Av	TWSC	NBR	12	0	10	74	87	F	87.0	F	9.0	A
140	Concession St / Drayton Av	TWSC	EBT	949	0	160	4	8	A				
140	Concession St / Drayton Av	TWSC	EBR	0	0	160	0	0	A				
150	Concession St / Leroy Grant Dr (S)	TWSC	SBL	8	0	5	7	17	C	17.0	C	8.9	A
150	Concession St / Leroy Grant Dr (S)	TWSC	EBL	40	70	75	1	4	A				
150	Concession St / Leroy Grant Dr (S)	TWSC	EBT	889	70	75	5	9	A				
155	Concession St / Leroy Grant Drive (N)	TWSC	NBL	29	5	5	3	11	B	11.0	B	0.8	A
155	Concession St / Leroy Grant Drive (N)	TWSC	NBT	11	5	5	1	11	B				
155	Concession St / Leroy Grant Drive (N)	TWSC	SBT	8	0	5	2	11	B				
155	Concession St / Leroy Grant Drive (N)	TWSC	SBR	77	0	5	0	0	A				
155	Concession St / Leroy Grant Drive (N)	TWSC	WBT	564	0	0	0	0	A				
155	Concession St / Leroy Grant Drive (N)	TWSC	WBR	26	0	0	0	1	A				
160	Concession St / Macdonnell St	Signalized	NBL	72	10	25	22	28	C	60.0	E	15.6	B
160	Concession St / Macdonnell St	Signalized	NBT	0	10	25	0	0	A				
160	Concession St / Macdonnell St	Signalized	NBR	19	10	25	10	15	B				
160	Concession St / Macdonnell St	Signalized	SBR	43	0	5	2	3	A				
160	Concession St / Macdonnell St	Signalized	EBL	37	75	80	11	17	B				
160	Concession St / Macdonnell St	Signalized	EBT	715	75	80	7	11	B				
160	Concession St / Macdonnell St	Signalized	EBR	148	75	80	5	9	A				
160	Concession St / Macdonnell St	Signalized	WBL	73	30	85	49	60	E				
160	Concession St / Macdonnell St	Signalized	WBT	474	30	85	12	17	B				
160	Concession St / Macdonnell St	Signalized	WBR	1	30	85	0	0	A				
170	Concession St / Connaught St	TWSC	SBL	9	0	5	10	18	C	26.0	D	4.9	A
170	Concession St / Connaught St	TWSC	SBR	8	0	5	17	26	D				
170	Concession St / Connaught St	TWSC	EBL	20	0	95	4	7	A				
170	Concession St / Connaught St	TWSC	EBT	713	0	95	1	2	A				
170	Concession St / Connaught St	TWSC	WBT	548	0	115	6	8	A				
170	Concession St / Connaught St	TWSC	WBR	0	0	115	0	0	A				
180	Concession St / Victoria St	Signalized	NBL	5	5	20	34	41	D	41.0	D	12.9	B
180	Concession St / Victoria St	Signalized	NBT	20	5	20	25	31	C				
180	Concession St / Victoria St	Signalized	NBR	46	5	20	4	9	A				
180	Concession St / Victoria St	Signalized	SBL	3	5	10	19	27	C				
180	Concession St / Victoria St	Signalized	SBT	35	5	10	21	25	C				
180	Concession St / Victoria St	Signalized	SBR	42	5	10	4	12	B				
180	Concession St / Victoria St	Signalized	EBL	20	35	90	9	14	B				
180	Concession St / Victoria St	Signalized	EBT	680	35	90	6	9	A				
180	Concession St / Victoria St	Signalized	EBR	9	35	90	6	12	B				
180	Concession St / Victoria St	Signalized	WBL	24	45	90	18	27	C				
180	Concession St / Victoria St	Signalized	WBT	506	45	90	10	16	B				
180	Concession St / Victoria St	Signalized	WBR	0	45	90	0	0	A				
190	Concession St / Nelson St	TWSC	NBL	8	0	5	12	22	C	22.0	C	3.9	A
190	Concession St / Nelson St	TWSC	NBT	0	0	5	0	0	A				
190	Concession St / Nelson St	TWSC	NBR	9	0	5	7	13	B				
190	Concession St / Nelson St	TWSC	SBL	0	5	5	0	0	A				
190	Concession St / Nelson St	TWSC	SBT	0	5	5	0	0	A				
190	Concession St / Nelson St	TWSC	SBR	26	5	5	0	6	A				
190	Concession St / Nelson St	TWSC	EBL	40	0	85	1	4	A				
190	Concession St / Nelson St	TWSC	EBT	689	0	85	1	2	A				
190	Concession St / Nelson St	TWSC	EBR	0	0	85	0	0	A				
190	Concession St / Nelson St	TWSC	WBL	0	0	95	0	0	A				
190	Concession St / Nelson St	TWSC	WBT	500	0	95	4	6	A				
190	Concession St / Nelson St	TWSC	WBR	0	0	95	0	0	A				

Williamsville Operational Analysis

2036 No Mitigation - Ultimate Growth, 35% Auto M.S. - AM Peak

Measures of Effectiveness Details



Node	Location	Control	Mvmt.	Volume (All)	Queue (m)		Stop Delay (s)	Delay (s)	LOS	Critical Mvmt		Intersection	
					50th	95th				Delay	LOS	Delay	LOS
200	Concession St / Kingscourt Av	TWSC	SBL	44	5	25	26	39	E	39.0	E	4.5	A
200	Concession St / Kingscourt Av	TWSC	SBR	5	5	25	16	32	D				
200	Concession St / Kingscourt Av	TWSC	EBL	40	0	75	3	6	A				
200	Concession St / Kingscourt Av	TWSC	EBT	649	0	75	1	3	A				
200	Concession St / Kingscourt Av	TWSC	WBT	492	0	35	2	3	A				
200	Concession St / Kingscourt Av	TWSC	WBR	7	0	35	0	0	A				
210	Concession St / Fergus St	TWSC	SBL	45	5	25	58	73	F	73.0	F	7.0	A
210	Concession St / Fergus St	TWSC	SBR	3	5	25	12	21	C				
210	Concession St / Fergus St	TWSC	EBL	30	0	100	2	7	A				
210	Concession St / Fergus St	TWSC	EBT	663	0	100	3	7	A				
210	Concession St / Fergus St	TWSC	WBT	490	0	25	0	1	A				
210	Concession St / Fergus St	TWSC	WBR	16	0	25	0	0	A				
220	Concession St / Grey St	TWSC	SBL	43	5	45	95	111	F	111.0	F	12.1	B
220	Concession St / Grey St	TWSC	SBR	3	5	45	46	78	F				
220	Concession St / Grey St	TWSC	EBL	21	50	105	5	11	B				
220	Concession St / Grey St	TWSC	EBT	685	50	105	8	15	B				
220	Concession St / Grey St	TWSC	WBT	504	0	0	0	0	A				
220	Concession St / Grey St	TWSC	WBR	24	0	0	0	0	A				
230	Concession St / Alfred St	Signalized	NBL	46	5	25	17	23	C	23.0	C	12.1	B
230	Concession St / Alfred St	Signalized	NBT	11	5	25	11	17	B				
230	Concession St / Alfred St	Signalized	NBR	46	5	25	6	13	B				
230	Concession St / Alfred St	Signalized	SBL	2	5	20	0	7	A				
230	Concession St / Alfred St	Signalized	SBT	35	5	20	13	19	B				
230	Concession St / Alfred St	Signalized	SBR	37	5	20	4	9	A				
230	Concession St / Alfred St	Signalized	EBL	34	55	60	12	18	B				
230	Concession St / Alfred St	Signalized	EBT	522	55	60	8	12	B				
230	Concession St / Alfred St	Signalized	EBR	172	55	60	1	3	A				
230	Concession St / Alfred St	Signalized	WBL	31	40	100	12	21	C				
230	Concession St / Alfred St	Signalized	WBT	441	40	100	8	13	B				
230	Concession St / Alfred St	Signalized	WBR	1	40	100	0	0	A				
240	Concession St / Lansdowne St	TWSC	NBL	0	0	0	0	0	A	5.0	A	0.6	A
240	Concession St / Lansdowne St	TWSC	NBR	0	0	0	0	0	A				
240	Concession St / Lansdowne St	TWSC	EBT	572	0	15	0	1	A				
240	Concession St / Lansdowne St	TWSC	EBR	0	0	15	0	0	A				
240	Concession St / Lansdowne St	TWSC	WBL	4	0	0	1	5	A				
240	Concession St / Lansdowne St	TWSC	WBT	472	0	0	0	0	A				
250	Concession St / Division St	Signalized	NBL	13	35	80	17	26	C	48.0	D	23.4	C
250	Concession St / Division St	Signalized	NBT	247	35	80	16	22	C				
250	Concession St / Division St	Signalized	NBR	45	35	80	13	18	B				
250	Concession St / Division St	Signalized	SBL	32	60	120	21	29	C				
250	Concession St / Division St	Signalized	SBT	396	60	120	17	23	C				
250	Concession St / Division St	Signalized	SBR	232	60	120	2	6	A				
250	Concession St / Division St	Signalized	EBL	202	35	105	16	23	C				
250	Concession St / Division St	Signalized	EBT	344	35	105	13	18	B				
250	Concession St / Division St	Signalized	EBR	20	35	105	7	10	A				
250	Concession St / Division St	Signalized	WBL	46	50	110	37	48	D				
250	Concession St / Division St	Signalized	WBT	237	50	110	35	46	D				
250	Concession St / Division St	Signalized	WBR	16	50	110	30	39	D				



Williamsville Operational Analysis

2036 No Mitigation - Ultimate Growth, 35% Auto M.S. - AM Peak

Measures of Effectiveness Details



Node	Location	Control	Mvmt.	Volume (All)	Queue (m)		Stop Delay (s)	Delay (s)	LOS	Critical Mvmt		Intersection	
					50th	95th				Delay	LOS	Delay	LOS
260	Adelaide St / Division St	TWSC	NBL	0	0	10	0	0	A	10.0	A	0.2	A
260	Adelaide St / Division St	TWSC	NBT	285	0	10	0	0	A				
260	Adelaide St / Division St	TWSC	NBR	2	0	10	0	0	A				
260	Adelaide St / Division St	TWSC	SBL	13	0	30	0	1	A				
260	Adelaide St / Division St	TWSC	SBT	397	0	30	0	0	A				
260	Adelaide St / Division St	TWSC	SBR	53	0	30	0	0	A				
260	Adelaide St / Division St	TWSC	EBL	11	0	5	2	10	A				
260	Adelaide St / Division St	TWSC	EBT	1	0	5	0	0	A				
260	Adelaide St / Division St	TWSC	EBR	1	0	5	0	0	A				
260	Adelaide St / Division St	TWSC	WBL	0	0	5	0	0	A				
260	Adelaide St / Division St	TWSC	WBT	1	0	5	0	0	A				
260	Adelaide St / Division St	TWSC	WBR	8	0	5	0	7	A				
270	Stanley St / Division St	TWSC	NBL	13	0	0	0	2	A	10.0	A	2.0	A
270	Stanley St / Division St	TWSC	NBT	236	0	0	0	0	A				
270	Stanley St / Division St	TWSC	SBT	395	0	25	0	2	A				
270	Stanley St / Division St	TWSC	SBR	0	0	25	0	0	A				
270	Stanley St / Division St	TWSC	EBL	49	5	10	2	10	A				
270	Stanley St / Division St	TWSC	EBR	16	5	10	2	8	A				
280	Pine St / Division St	Signalized	NBL	7	5	20	10	14	B	32.0	C	8.8	A
280	Pine St / Division St	Signalized	NBT	204	5	20	2	4	A				
280	Pine St / Division St	Signalized	NBR	7	5	20	0	2	A				
280	Pine St / Division St	Signalized	SBL	34	20	70	4	7	A				
280	Pine St / Division St	Signalized	SBT	385	20	70	4	8	A				
280	Pine St / Division St	Signalized	SBR	0	20	70	0	0	A				
280	Pine St / Division St	Signalized	EBL	2	5	20	0	0	A				
280	Pine St / Division St	Signalized	EBT	29	5	20	24	28	C				
280	Pine St / Division St	Signalized	EBR	39	5	20	6	11	B				
280	Pine St / Division St	Signalized	WBL	19	5	25	22	29	C				
280	Pine St / Division St	Signalized	WBT	16	5	25	24	32	C				
280	Pine St / Division St	Signalized	WBR	45	5	25	3	9	A				
290	Quebec St / Division St	TWSC	NBT	217	0	0	0	0	A	9.0	A	0.9	A
290	Quebec St / Division St	TWSC	NBR	4	0	0	0	0	A				
290	Quebec St / Division St	TWSC	SBL	3	0	50	0	0	A				
290	Quebec St / Division St	TWSC	SBT	440	0	50	0	1	A				
290	Quebec St / Division St	TWSC	WBL	16	0	5	1	9	A				
290	Quebec St / Division St	TWSC	WBR	2	0	5	0	0	A				
300	York St / Division St	Signalized	NBL	0	20	35	0	0	A	30.0	C	7.4	A
300	York St / Division St	Signalized	NBT	199	20	35	3	5	A				
300	York St / Division St	Signalized	NBR	21	20	35	1	3	A				
300	York St / Division St	Signalized	SBL	46	15	50	4	8	A				
300	York St / Division St	Signalized	SBT	408	15	50	3	5	A				
300	York St / Division St	Signalized	SBR	0	15	50	0	0	A				
300	York St / Division St	Signalized	EBL	0	5	15	0	0	A				
300	York St / Division St	Signalized	EBT	32	5	15	19	24	C				
300	York St / Division St	Signalized	EBR	2	5	15	10	17	B				
300	York St / Division St	Signalized	WBL	29	5	20	21	28	C				
300	York St / Division St	Signalized	WBT	12	5	20	23	30	C				
300	York St / Division St	Signalized	WBR	21	5	20	4	11	B				
310	Main St / Division St	TWSC	NBT	213	0	10	1	2	A	10.0	A	0.8	A
310	Main St / Division St	TWSC	NBR	0	0	10	0	0	A				
310	Main St / Division St	TWSC	SBL	15	35	40	0	1	A				
310	Main St / Division St	TWSC	SBT	415	35	40	0	0	A				
310	Main St / Division St	TWSC	WBL	2	0	5	2	10	A				
310	Main St / Division St	TWSC	WBR	7	0	5	1	8	A				
320	Hamilton St / Division St	TWSC	NBL	3	0	0	0	0	A	8.0	A	0.2	A
320	Hamilton St / Division St	TWSC	NBT	198	0	0	0	0	A				
320	Hamilton St / Division St	TWSC	SBT	394	0	0	0	0	A				
320	Hamilton St / Division St	TWSC	SBR	27	0	0	0	0	A				
320	Hamilton St / Division St	TWSC	EBL	15	5	5	1	8	A				
320	Hamilton St / Division St	TWSC	EBR	3	5	5	0	6	A				



Williamsville Operational Analysis

2036 No Mitigation - Ultimate Growth, 35% Auto M.S. - AM Peak

Measures of Effectiveness Details

Node	Location	Control	Mvmt.	Volume (All)	Queue (m)		Stop Delay (s)	Delay (s)	LOS	Critical Mvmt		Intersection	
					50th	95th				Delay	LOS	Delay	LOS
330	Raglan St / Division St	TWSC	NBT	195	0	0	0	0	A	9.0	A	0.4	A
330	Raglan St / Division St	TWSC	NBR	25	0	0	0	0	A				
330	Raglan St / Division St	TWSC	SBL	12	0	0	0	2	A				
330	Raglan St / Division St	TWSC	SBT	384	0	0	0	0	A				
330	Raglan St / Division St	TWSC	WBL	24	5	5	1	8	A				
330	Raglan St / Division St	TWSC	WBR	5	5	5	1	9	A				
340	Elm St / Division St	TWSC	NBL	1	0	0	0	0	A	8.0	A	0.2	A
340	Elm St / Division St	TWSC	NBT	201	0	0	0	0	A				
340	Elm St / Division St	TWSC	SBT	390	0	0	0	0	A				
340	Elm St / Division St	TWSC	SBR	19	0	0	0	1	A				
340	Elm St / Division St	TWSC	EBL	17	0	5	2	8	A				
340	Elm St / Division St	TWSC	EBR	0	0	5	0	0	A				
350	Ellice St / Division St	TWSC	NBT	201	0	0	0	0	A	13.0	B	0.2	A
350	Ellice St / Division St	TWSC	NBR	8	0	0	0	0	A				
350	Ellice St / Division St	TWSC	SBL	9	0	0	0	1	A				
350	Ellice St / Division St	TWSC	SBT	380	0	0	0	0	A				
350	Ellice St / Division St	TWSC	WBL	8	0	5	4	13	B				
350	Ellice St / Division St	TWSC	WBR	4	0	5	0	7	A				
360	Colborne St / Division St	TWSC	NBL	0	0	20	0	0	A	11.0	B	1.4	A
360	Colborne St / Division St	TWSC	NBT	185	0	20	0	0	A				
360	Colborne St / Division St	TWSC	NBR	2	0	20	0	0	A				
360	Colborne St / Division St	TWSC	SBL	7	0	25	0	3	A				
360	Colborne St / Division St	TWSC	SBT	375	0	25	1	1	A				
360	Colborne St / Division St	TWSC	SBR	7	0	25	0	0	A				
360	Colborne St / Division St	TWSC	EBL	22	5	10	1	9	A				
360	Colborne St / Division St	TWSC	EBT	8	5	10	2	11	B				
360	Colborne St / Division St	TWSC	EBR	12	5	10	2	10	A				
360	Colborne St / Division St	TWSC	WBL	7	0	5	2	11	B				
360	Colborne St / Division St	TWSC	WBT	0	0	5	0	0	A				
360	Colborne St / Division St	TWSC	WBR	3	0	5	0	7	A				
370	Queen St / Division St	Signalized	NBT	71	10	25	8	11	B	24.0	C	15.8	B
370	Queen St / Division St	Signalized	NBR	121	10	25	1	10	A				
370	Queen St / Division St	Signalized	SBL	119	50	80	16	24	C				
370	Queen St / Division St	Signalized	SBT	277	50	80	14	20	B				
370	Queen St / Division St	Signalized	WBL	201	20	35	11	17	B				
370	Queen St / Division St	Signalized	WBR	117	20	35	0	4	A				



Williamsville Operational Analysis

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Measures of Effectiveness Details

ID	Intersection Name	Control Type	Number of Vehicles	50th %ile Queue (m)	95th %ile Queue (m)	Avg. Vehicle Delay (sec)	Avg. Stop Delay (sec)	LOS
10	Princess St / Concession St	Signalized	3,728	185.8	229.9	59.2	48.7	E
20	Princess St / Regent St	TWSC	1,346	0.1	50.9	2.6	1.0	-
30	Princess St / Drayton Av	TWSC	1,304	4.1	36.4	2.5	0.3	-
40	Princess St / Macdonnell Av	Signalized	1,319	90.2	174.8	20.9	14.4	C
50	Princess St / Smith St	TWSC	1,042	28.2	61.5	3.5	1.8	-
60	Princess St / Victoria St	Signalized	1,477	28.4	96.5	12.2	7.0	B
70	Princess St / Nelson St	TWSC	1,367	17.5	103.4	5.4	2.0	-
80	Princess St / Albert St	Signalized	1,394	40.4	88.0	16.6	10.8	B
90	Princess St / Frontenac St	TWSC	1,138	8.7	55.1	3.2	0.7	-
100	Princess St / Alfred St	Signalized	1,524	56.2	90.1	26.3	18.0	C
110	Princess St / Chatham St	TWSC	1,210	24.8	88.3	4.9	1.8	-
120	Princess St / University Av	Signalized	1,041	30.4	59.0	9.1	5.3	A
130	Princess St / Division St	Signalized	1,370	20.6	58.2	16.2	10.8	B
140	Concession St / Drayton Av	TWSC	1,245	314.0	319.2	57.8	30.0	-
150	Concession St / Leroy Grant Dr (S)	TWSC	1,223	73.7	73.7	31.1	16.2	-
155	Concession St / Leroy Grant Drive (N)	TWSC	1,526	4.8	5.3	5.2	3.1	-
160	Concession St / Macdonnell St	Signalized	2,490	73.6	80.3	17.3	12.1	B
170	Concession St / Connaught St	TWSC	1,975	74.4	104.9	8.9	4.8	-
180	Concession St / Victoria St	Signalized	2,186	92.8	99.2	17.8	11.5	B
190	Concession St / Nelson St	TWSC	1,940	50.4	91.9	11.7	7.9	-
200	Concession St / Kingscourt Av	TWSC	1,854	52.0	94.3	12.0	7.2	-
210	Concession St / Fergus St	TWSC	1,854	55.3	99.4	13.4	8.5	-
220	Concession St / Grey St	TWSC	1,871	57.3	79.5	10.1	6.6	-
230	Concession St / Alfred St	Signalized	1,998	121.4	135.5	41.6	30.1	D
240	Concession St / Lansdowne St	TWSC	1,308	63.0	258.2	10.6	5.6	-
250	Concession St / Division St	Signalized	2,417	131.3	195.9	48.7	38.2	D
260	Adelaide St / Division St	TWSC	1,276	59.7	102.1	24.3	18.7	-
270	Stanley St / Division St	TWSC	1,144	44.9	70.3	15.9	10.8	-
280	Pine St / Division St	Signalized	1,232	49.6	70.4	23.9	16.9	C
290	Quebec St / Division St	TWSC	1,051	43.4	78.4	9.0	6.1	-
300	York St / Division St	Signalized	1,162	26.8	47.1	10.8	7.8	B
310	Main St / Division St	TWSC	1,044	46.6	49.7	12.8	8.5	-
320	Hamilton St / Division St	TWSC	1,070	65.6	68.6	23.5	15.0	-
330	Raglan St / Division St	TWSC	1,091	35.0	35.3	9.3	5.9	-
340	Elm St / Division St	TWSC	1,219	37.5	43.0	9.2	5.8	-
350	Ellice St / Division St	TWSC	1,148	32.8	39.5	5.2	3.8	-
360	Colborne St / Division St	TWSC	1,207	90.7	233.0	9.9	5.7	-
370	Queen St / Division St	Signalized	1,528	56.3	179.0	35.3	20.1	D
<b>Total</b>			<b>57,319</b>	<b>2,288</b>	<b>3,846</b>	<b>658</b>	<b>430</b>	



Williamsville Operational Analysis

2036 No Mitigation - Ultimate Growth, 35% Auto M.S. - PM Peak

Measures of Effectiveness Details

Node	Location	Control	Mvmt.	Volume (All)	Queue (m)		Stop Delay (s)	Delay (s)	LOS	Critical Mvmt		Intersection	
					50th	95th				Delay	LOS	Delay	LOS
10	Princess St / Concession St	Signalized	NBL	212	35	45	31	39	D	137.0	F	59.2	E
10	Princess St / Concession St	Signalized	NBT	190	35	45	28	35	C				
10	Princess St / Concession St	Signalized	NBR	14	35	45	21	28	C				
10	Princess St / Concession St	Signalized	SBL	693	420	435	85	101	F				
10	Princess St / Concession St	Signalized	SBT	552	420	435	82	99	F				
10	Princess St / Concession St	Signalized	SBR	0	420	435	0	0	A				
10	Princess St / Concession St	Signalized	EBT	370	125	290	111	137	F				
10	Princess St / Concession St	Signalized	EBR	322	125	290	15	21	C				
10	Princess St / Concession St	Signalized	WBT	516	50	70	33	40	D				
10	Princess St / Concession St	Signalized	WBR	822	50	70	0	0	A				
10	Princess St / Concession St	Signalized	WBL	37	50	70	64	74	E				
20	Princess St / Regent St	TWSC	NBL	0	5	10	0	0	A	10.0	A	2.6	A
20	Princess St / Regent St	TWSC	NBR	33	5	10	3	10	A				
20	Princess St / Regent St	TWSC	EBT	747	0	50	1	2	A				
20	Princess St / Regent St	TWSC	EBR	71	0	50	0	2	A				
20	Princess St / Regent St	TWSC	WBL	34	0	55	3	5	A				
20	Princess St / Regent St	TWSC	WBT	461	0	55	1	3	A				
30	Princess St / Drayton Av	TWSC	SBL	9	45	50	10	25	C	25.0	C	2.5	A
30	Princess St / Drayton Av	TWSC	SBR	109	45	50	3	16	C				
30	Princess St / Drayton Av	TWSC	EBL	22	0	35	1	4	A				
30	Princess St / Drayton Av	TWSC	EBT	759	0	35	0	1	A				
30	Princess St / Drayton Av	TWSC	WBT	387	0	35	0	1	A				
30	Princess St / Drayton Av	TWSC	WBR	18	0	35	0	1	A				
40	Princess St / Macdonnell Av	Signalized	NBL	9	10	35	10	16	B	31.0	C	20.9	C
40	Princess St / Macdonnell Av	Signalized	NBT	96	10	35	12	17	B				
40	Princess St / Macdonnell Av	Signalized	NBR	18	10	35	9	13	B				
40	Princess St / Macdonnell Av	Signalized	SBL	3	40	40	2	11	B				
40	Princess St / Macdonnell Av	Signalized	SBT	54	40	40	13	20	B				
40	Princess St / Macdonnell Av	Signalized	SBR	51	40	40	5	10	A				
40	Princess St / Macdonnell Av	Signalized	EBL	44	130	275	24	31	C				
40	Princess St / Macdonnell Av	Signalized	EBT	658	130	275	17	25	C				
40	Princess St / Macdonnell Av	Signalized	EBR	35	130	275	16	24	C				
40	Princess St / Macdonnell Av	Signalized	WBL	0	50	55	0	0	A				
40	Princess St / Macdonnell Av	Signalized	WBT	345	50	55	11	15	B				
40	Princess St / Macdonnell Av	Signalized	WBR	6	50	55	9	12	B				
50	Princess St / Smith St	TWSC	SBL	1	40	40	1	11	B	19.0	C	3.5	A
50	Princess St / Smith St	TWSC	SBR	6	40	40	8	19	C				
50	Princess St / Smith St	TWSC	EBL	43	40	65	1	2	A				
50	Princess St / Smith St	TWSC	EBT	640	40	65	0	1	A				
50	Princess St / Smith St	TWSC	WBT	346	5	55	5	8	A				
50	Princess St / Smith St	TWSC	WBR	6	5	55	4	6	A				
60	Princess St / Victoria St	Signalized	NBL	8	20	45	16	21	C	30.0	C	12.2	B
60	Princess St / Victoria St	Signalized	NBT	93	20	45	18	25	C				
60	Princess St / Victoria St	Signalized	NBR	55	20	45	11	17	B				
60	Princess St / Victoria St	Signalized	SBL	81	15	30	22	30	C				
60	Princess St / Victoria St	Signalized	SBT	47	15	30	18	27	C				
60	Princess St / Victoria St	Signalized	SBR	1	15	30	3	8	A				
60	Princess St / Victoria St	Signalized	EBL	20	15	115	11	17	B				
60	Princess St / Victoria St	Signalized	EBT	597	15	115	2	6	A				
60	Princess St / Victoria St	Signalized	EBR	30	15	115	1	5	A				
60	Princess St / Victoria St	Signalized	WBL	15	50	105	14	20	B				
60	Princess St / Victoria St	Signalized	WBT	358	50	105	7	12	B				
60	Princess St / Victoria St	Signalized	WBR	172	50	105	7	13	B				
70	Princess St / Nelson St	TWSC	NBL	19	5	45	16	27	D	27.0	D	5.4	A
70	Princess St / Nelson St	TWSC	NBT	2	5	45	12	25	C				
70	Princess St / Nelson St	TWSC	NBR	6	5	45	3	16	C				
70	Princess St / Nelson St	TWSC	SBL	0	0	5	0	0	A				
70	Princess St / Nelson St	TWSC	SBT	6	0	5	9	20	C				
70	Princess St / Nelson St	TWSC	SBR	0	0	5	0	0	A				
70	Princess St / Nelson St	TWSC	EBL	74	0	105	5	11	B				
70	Princess St / Nelson St	TWSC	EBT	656	0	105	1	4	A				
70	Princess St / Nelson St	TWSC	EBR	11	0	105	0	3	A				
70	Princess St / Nelson St	TWSC	WBL	45	40	105	5	9	A				
70	Princess St / Nelson St	TWSC	WBT	546	40	105	2	5	A				
70	Princess St / Nelson St	TWSC	WBR	2	40	105	0	10	A				



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Measures of Effectiveness Details

Node	Location	Control	Mvmt.	Volume (All)	Queue (m)		Stop Delay (s)	Delay (s)	LOS	Critical Mvmt		Intersection	
					50th	95th				Delay	LOS	Delay	LOS
80	Princess St / Albert St	Signalized	NBL	57	10	50	18	26	C	40.0	D	16.6	B
80	Princess St / Albert St	Signalized	NBT	11	10	50	17	24	C				
80	Princess St / Albert St	Signalized	NBR	51	10	50	6	11	B				
80	Princess St / Albert St	Signalized	SBL	4	10	25	12	23	C				
80	Princess St / Albert St	Signalized	SBT	32	10	25	13	18	B				
80	Princess St / Albert St	Signalized	SBR	118	10	25	2	8	A				
80	Princess St / Albert St	Signalized	EBL	42	60	115	23	32	C				
80	Princess St / Albert St	Signalized	EBT	607	60	115	12	18	B				
80	Princess St / Albert St	Signalized	EBR	14	60	115	8	15	B				
80	Princess St / Albert St	Signalized	WBL	8	30	80	32	40	D				
80	Princess St / Albert St	Signalized	WBT	430	30	80	9	14	B				
80	Princess St / Albert St	Signalized	WBR	20	30	80	14	21	C				
90	Princess St / Frontenac St	TWSC	NBL	1	0	20	0	0	A	15.0	B	3.2	A
90	Princess St / Frontenac St	TWSC	NBT	14	0	20	6	15	B				
90	Princess St / Frontenac St	TWSC	NBR	1	0	20	0	0	A				
90	Princess St / Frontenac St	TWSC	SBL	0	0	0	0	0	A				
90	Princess St / Frontenac St	TWSC	SBT	0	0	0	0	0	A				
90	Princess St / Frontenac St	TWSC	SBR	1	0	0	0	7	A				
90	Princess St / Frontenac St	TWSC	EBL	90	15	95	2	7	A				
90	Princess St / Frontenac St	TWSC	EBT	566	15	95	1	4	A				
90	Princess St / Frontenac St	TWSC	EBR	1	15	95	0	0	A				
90	Princess St / Frontenac St	TWSC	WBL	9	0	0	1	4	A				
90	Princess St / Frontenac St	TWSC	WBT	455	0	0	0	1	A				
90	Princess St / Frontenac St	TWSC	WBR	0	0	0	0	0	A				
100	Princess St / Alfred St	Signalized	NBL	75	35	70	18	27	C	35.0	C	26.3	C
100	Princess St / Alfred St	Signalized	NBT	138	35	70	16	24	C				
100	Princess St / Alfred St	Signalized	NBR	127	35	70	11	19	B				
100	Princess St / Alfred St	Signalized	SBL	83	20	40	24	35	C				
100	Princess St / Alfred St	Signalized	SBT	45	20	40	20	29	C				
100	Princess St / Alfred St	Signalized	SBR	25	20	40	10	17	B				
100	Princess St / Alfred St	Signalized	EBL	45	75	115	27	35	C				
100	Princess St / Alfred St	Signalized	EBT	512	75	115	19	28	C				
100	Princess St / Alfred St	Signalized	EBR	28	75	115	14	22	C				
100	Princess St / Alfred St	Signalized	WBL	55	60	90	16	24	C				
100	Princess St / Alfred St	Signalized	WBT	361	60	90	19	26	C				
100	Princess St / Alfred St	Signalized	WBR	30	60	90	9	15	B				
110	Princess St / Chatham St	TWSC	SBL	0	0	5	0	0	A	20.0	C	4.9	A
110	Princess St / Chatham St	TWSC	SBR	12	0	5	4	20	C				
110	Princess St / Chatham St	TWSC	EBL	152	25	105	3	8	A				
110	Princess St / Chatham St	TWSC	EBT	570	25	105	2	6	A				
110	Princess St / Chatham St	TWSC	WBT	434	25	65	1	2	A				
110	Princess St / Chatham St	TWSC	WBR	42	25	65	2	4	A				
120	Princess St / University Av	Signalized	NBL	96	10	25	17	22	C	22.0	C	9.1	A
120	Princess St / University Av	Signalized	NBR	5	10	25	10	14	B				
120	Princess St / University Av	Signalized	EBT	491	45	75	4	8	A				
120	Princess St / University Av	Signalized	EBR	61	45	75	3	6	A				
120	Princess St / University Av	Signalized	WBL	21	15	45	12	18	B				
120	Princess St / University Av	Signalized	WBT	367	15	45	4	7	A				
130	Princess St / Division St	Signalized	NBL	103	25	50	14	25	C	28.0	C	16.2	B
130	Princess St / Division St	Signalized	NBT	195	25	50	15	21	C				
130	Princess St / Division St	Signalized	NBR	11	25	50	10	16	B				
130	Princess St / Division St	Signalized	SBL	145	10	70	6	11	B				
130	Princess St / Division St	Signalized	SBT	131	10	70	5	6	A				
130	Princess St / Division St	Signalized	SBR	288	10	70	0	1	A				
130	Princess St / Division St	Signalized	EBL	83	30	50	21	28	C				
130	Princess St / Division St	Signalized	EBT	368	30	50	18	26	C				
130	Princess St / Division St	Signalized	EBR	46	30	50	9	17	B				



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Measures of Effectiveness Details

Node	Location	Control	Mvmt.	Volume (All)	Queue (m)		Stop Delay (s)	Delay (s)	LOS	Critical Mvmt		Intersection	
					50th	95th				Delay	LOS	Delay	LOS
140	Concession St / Drayton Av	TWSC	NBR	5	65	125	1202	1217	F	1217.0	F	57.8	F
140	Concession St / Drayton Av	TWSC	EBT	1,187	315	320	25	53	F				
140	Concession St / Drayton Av	TWSC	EBR	53	315	320	31	55	F				
150	Concession St / Leroy Grant Dr (S)	TWSC	SBL	22	5	5	18	31	D	32.0	D	31.1	D
150	Concession St / Leroy Grant Dr (S)	TWSC	EBL	160	75	75	17	32	D				
150	Concession St / Leroy Grant Dr (S)	TWSC	EBT	1,041	75	75	16	31	D				
155	Concession St / Leroy Grant Drive (N)	TWSC	NBL	76	45	50	28	46	E	46.0	E	5.2	A
155	Concession St / Leroy Grant Drive (N)	TWSC	NBT	84	45	50	27	45	E				
155	Concession St / Leroy Grant Drive (N)	TWSC	SBT	21	5	5	18	28	D				
155	Concession St / Leroy Grant Drive (N)	TWSC	SBR	5	5	5	0	0	A				
155	Concession St / Leroy Grant Drive (N)	TWSC	WBT	1,300	0	0	0	0	A				
155	Concession St / Leroy Grant Drive (N)	TWSC	WBR	40	0	0	0	1	A				
160	Concession St / Macdonnell St	Signalized	NBL	250	45	80	26	34	C	73.0	E	17.3	B
160	Concession St / Macdonnell St	Signalized	NBT	25	45	80	26	32	C				
160	Concession St / Macdonnell St	Signalized	NBR	27	45	80	27	35	C				
160	Concession St / Macdonnell St	Signalized	SBR	71	5	15	9	15	B				
160	Concession St / Macdonnell St	Signalized	EBL	58	75	80	47	58	E				
160	Concession St / Macdonnell St	Signalized	EBT	892	75	80	8	13	B				
160	Concession St / Macdonnell St	Signalized	EBR	111	75	80	7	11	B				
160	Concession St / Macdonnell St	Signalized	WBL	31	85	85	60	73	E				
160	Concession St / Macdonnell St	Signalized	WBT	1,025	85	85	9	13	B				
160	Concession St / Macdonnell St	Signalized	WBR	0	85	85	0	0	A				
170	Concession St / Connaught St	TWSC	SBL	0	0	5	0	0	A	28.0	D	8.9	A
170	Concession St / Connaught St	TWSC	SBR	16	0	5	18	28	D				
170	Concession St / Connaught St	TWSC	EBL	0	35	95	0	0	A				
170	Concession St / Connaught St	TWSC	EBT	913	35	95	2	5	A				
170	Concession St / Connaught St	TWSC	WBT	1,046	110	115	7	12	B				
170	Concession St / Connaught St	TWSC	WBR	0	110	115	0	0	A				
180	Concession St / Victoria St	Signalized	NBL	34	20	70	35	47	D	47.0	D	17.8	B
180	Concession St / Victoria St	Signalized	NBT	49	20	70	34	42	D				
180	Concession St / Victoria St	Signalized	NBR	78	20	70	23	32	C				
180	Concession St / Victoria St	Signalized	SBL	3	0	10	28	36	D				
180	Concession St / Victoria St	Signalized	SBT	23	0	10	19	23	C				
180	Concession St / Victoria St	Signalized	SBR	36	0	10	6	17	B				
180	Concession St / Victoria St	Signalized	EBL	16	115	115	24	33	C				
180	Concession St / Victoria St	Signalized	EBT	806	115	115	8	14	B				
180	Concession St / Victoria St	Signalized	EBR	98	115	115	8	14	B				
180	Concession St / Victoria St	Signalized	WBL	52	90	95	26	34	C				
180	Concession St / Victoria St	Signalized	WBT	975	90	95	11	17	B				
180	Concession St / Victoria St	Signalized	WBR	16	90	95	0	1	A				
190	Concession St / Nelson St	TWSC	NBL	8	0	5	358	376	F	376.0	F	11.7	B
190	Concession St / Nelson St	TWSC	NBT	0	0	5	0	0	A				
190	Concession St / Nelson St	TWSC	NBR	7	0	5	17	23	C				
190	Concession St / Nelson St	TWSC	SBL	0	0	5	0	0	A				
190	Concession St / Nelson St	TWSC	SBT	0	0	5	0	0	A				
190	Concession St / Nelson St	TWSC	SBR	12	0	5	0	6	A				
190	Concession St / Nelson St	TWSC	EBL	0	0	85	0	0	A				
190	Concession St / Nelson St	TWSC	EBT	813	0	85	1	2	A				
190	Concession St / Nelson St	TWSC	EBR	70	0	85	2	3	A				
190	Concession St / Nelson St	TWSC	WBL	13	95	100	10	19	C				
190	Concession St / Nelson St	TWSC	WBT	1,017	95	100	11	17	C				
190	Concession St / Nelson St	TWSC	WBR	0	95	100	0	0	A				

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Measures of Effectiveness Details



Node	Location	Control	Mvmt.	Volume (All)	Queue (m)		Stop Delay (s)	Delay (s)	LOS	Critical Mvmt		Intersection	
					50th	95th				Delay	LOS	Delay	LOS
200	Concession St / Kingscourt Av	TWSC	SBL	0	0	15	0	0	A	57.0	F	12.0	B
200	Concession St / Kingscourt Av	TWSC	SBR	16	0	15	41	57	F				
200	Concession St / Kingscourt Av	TWSC	EBL	2	0	95	20	33	D				
200	Concession St / Kingscourt Av	TWSC	EBT	821	0	95	3	5	A				
200	Concession St / Kingscourt Av	TWSC	WBT	1,015	95	95	10	17	C				
200	Concession St / Kingscourt Av	TWSC	WBR	0	95	95	0	0	A				
210	Concession St / Fergus St	TWSC	SBL	12	0	5	128	139	F	139.0	F	13.4	B
210	Concession St / Fergus St	TWSC	SBR	0	0	5	0	0	A				
210	Concession St / Fergus St	TWSC	EBL	0	0	100	0	0	A				
210	Concession St / Fergus St	TWSC	EBT	816	0	100	5	7	A				
210	Concession St / Fergus St	TWSC	WBT	1,022	100	100	10	17	C				
210	Concession St / Fergus St	TWSC	WBR	4	100	100	0	2	A				
220	Concession St / Grey St	TWSC	SBL	0	0	5	0	0	A	26.0	D	10.1	B
220	Concession St / Grey St	TWSC	SBR	15	0	5	15	26	D				
220	Concession St / Grey St	TWSC	EBL	0	55	105	0	0	A				
220	Concession St / Grey St	TWSC	EBT	830	55	105	11	16	C				
220	Concession St / Grey St	TWSC	WBT	1,021	60	60	3	5	A				
220	Concession St / Grey St	TWSC	WBR	5	60	60	2	6	A				
230	Concession St / Alfred St	Signalized	NBL	260	265	325	103	132	F	132.0	F	41.6	D
230	Concession St / Alfred St	Signalized	NBT	33	265	325	94	122	F				
230	Concession St / Alfred St	Signalized	NBR	27	265	325	80	104	F				
230	Concession St / Alfred St	Signalized	SBL	0	5	20	0	0	A				
230	Concession St / Alfred St	Signalized	SBT	35	5	20	16	21	C				
230	Concession St / Alfred St	Signalized	SBR	22	5	20	17	24	C				
230	Concession St / Alfred St	Signalized	EBL	22	55	60	25	31	C				
230	Concession St / Alfred St	Signalized	EBT	478	55	60	13	18	B				
230	Concession St / Alfred St	Signalized	EBR	317	55	60	3	5	A				
230	Concession St / Alfred St	Signalized	WBL	58	140	145	25	38	D				
230	Concession St / Alfred St	Signalized	WBT	746	140	145	24	37	D				
230	Concession St / Alfred St	Signalized	WBR	0	140	145	0	0	A				
240	Concession St / Lansdowne St	TWSC	NBL	5	5	10	79	91	F	91.0	F	10.6	B
240	Concession St / Lansdowne St	TWSC	NBR	20	5	10	19	32	D				
240	Concession St / Lansdowne St	TWSC	EBT	460	0	0	0	1	A				
240	Concession St / Lansdowne St	TWSC	EBR	0	0	0	0	0	A				
240	Concession St / Lansdowne St	TWSC	WBL	56	100	410	8	14	B				
240	Concession St / Lansdowne St	TWSC	WBT	767	100	410	8	15	B				
250	Concession St / Division St	Signalized	NBL	144	115	115	61	76	E	103.0	F	48.7	D
250	Concession St / Division St	Signalized	NBT	546	115	115	37	46	D				
250	Concession St / Division St	Signalized	NBR	12	115	115	28	34	C				
250	Concession St / Division St	Signalized	SBL	28	160	315	38	51	D				
250	Concession St / Division St	Signalized	SBT	486	160	315	25	33	C				
250	Concession St / Division St	Signalized	SBR	284	160	315	16	27	C				
250	Concession St / Division St	Signalized	EBL	227	35	100	18	26	C				
250	Concession St / Division St	Signalized	EBT	202	35	100	12	18	B				
250	Concession St / Division St	Signalized	EBR	36	35	100	2	5	A				
250	Concession St / Division St	Signalized	WBL	45	205	210	86	103	F				
250	Concession St / Division St	Signalized	WBT	375	205	210	86	103	F				
250	Concession St / Division St	Signalized	WBR	32	205	210	80	95	F				





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Measures of Effectiveness Details

Node	Location	Control	Mvmt.	Volume (All)	Queue (m)		Stop Delay (s)	Delay (s)	LOS	Critical Mvmt		Intersection	
					50th	95th				Delay	LOS	Delay	LOS
260	Adelaide St / Division St	TWSC	NBL	0	110	110	0	0	A	486.0	F	24.3	C
260	Adelaide St / Division St	TWSC	NBT	692	110	110	27	36	E				
260	Adelaide St / Division St	TWSC	NBR	0	110	110	0	0	A				
260	Adelaide St / Division St	TWSC	SBL	0	0	95	0	0	A				
260	Adelaide St / Division St	TWSC	SBT	438	0	95	1	2	A				
260	Adelaide St / Division St	TWSC	SBR	125	0	95	0	1	A				
260	Adelaide St / Division St	TWSC	EBL	10	5	60	469	486	F				
260	Adelaide St / Division St	TWSC	EBT	0	5	60	0	0	A				
260	Adelaide St / Division St	TWSC	EBR	0	5	60	0	0	A				
260	Adelaide St / Division St	TWSC	WBL	10	0	5	11	20	C				
260	Adelaide St / Division St	TWSC	WBT	1	0	5	0	0	A				
260	Adelaide St / Division St	TWSC	WBR	0	0	5	0	0	A				
270	Stanley St / Division St	TWSC	NBL	0	75	75	0	0	A	80.0	F	15.9	C
270	Stanley St / Division St	TWSC	NBT	685	75	75	16	23	C				
270	Stanley St / Division St	TWSC	SBT	384	0	65	1	3	A				
270	Stanley St / Division St	TWSC	SBR	61	0	65	1	2	A				
270	Stanley St / Division St	TWSC	EBL	14	0	10	68	80	F				
270	Stanley St / Division St	TWSC	EBR	0	0	10	0	0	A				
280	Pine St / Division St	Signalized	NBL	33	75	80	15	25	C	63.0	E	23.9	C
280	Pine St / Division St	Signalized	NBT	618	75	80	20	28	C				
280	Pine St / Division St	Signalized	NBR	0	75	80	0	0	A				
280	Pine St / Division St	Signalized	SBL	25	25	70	14	20	B				
280	Pine St / Division St	Signalized	SBT	344	25	70	5	9	A				
280	Pine St / Division St	Signalized	SBR	16	25	70	5	10	A				
280	Pine St / Division St	Signalized	EBL	3	5	25	31	39	D				
280	Pine St / Division St	Signalized	EBT	42	5	25	20	24	C				
280	Pine St / Division St	Signalized	EBR	37	5	25	7	12	B				
280	Pine St / Division St	Signalized	WBL	5	20	50	52	63	E				
280	Pine St / Division St	Signalized	WBT	45	20	50	38	48	D				
280	Pine St / Division St	Signalized	WBR	64	20	50	42	55	D				
290	Quebec St / Division St	TWSC	NBT	651	70	85	9	13	B	17.0	C	9.0	A
290	Quebec St / Division St	TWSC	NBR	0	70	85	0	0	A				
290	Quebec St / Division St	TWSC	SBL	0	0	70	0	0	A				
290	Quebec St / Division St	TWSC	SBT	386	0	70	1	2	A				
290	Quebec St / Division St	TWSC	WBL	14	0	5	9	17	C				
290	Quebec St / Division St	TWSC	WBR	0	0	5	0	0	A				
300	York St / Division St	Signalized	NBL	1	35	40	0	0	A	31.0	C	10.8	B
300	York St / Division St	Signalized	NBT	619	35	40	6	8	A				
300	York St / Division St	Signalized	NBR	6	35	40	2	3	A				
300	York St / Division St	Signalized	SBL	38	20	65	19	26	C				
300	York St / Division St	Signalized	SBT	363	20	65	4	7	A				
300	York St / Division St	Signalized	SBR	0	20	65	0	0	A				
300	York St / Division St	Signalized	EBL	0	5	15	0	0	A				
300	York St / Division St	Signalized	EBT	31	5	15	26	30	C				
300	York St / Division St	Signalized	EBR	1	5	15	0	0	A				
300	York St / Division St	Signalized	WBL	45	10	30	24	31	C				
300	York St / Division St	Signalized	WBT	24	10	30	24	31	C				
300	York St / Division St	Signalized	WBR	34	10	30	19	29	C				
310	Main St / Division St	TWSC	NBT	624	55	60	14	21	C	47.0	E	12.8	B
310	Main St / Division St	TWSC	NBR	0	55	60	0	0	A				
310	Main St / Division St	TWSC	SBL	0	35	35	0	0	A				
310	Main St / Division St	TWSC	SBT	410	35	35	0	0	A				
310	Main St / Division St	TWSC	WBL	8	0	5	11	19	C				
310	Main St / Division St	TWSC	WBR	2	0	5	36	47	E				
320	Hamilton St / Division St	TWSC	NBL	17	110	115	32	49	E	49.0	E	23.5	C
320	Hamilton St / Division St	TWSC	NBT	621	110	115	25	39	E				
320	Hamilton St / Division St	TWSC	SBT	382	0	0	0	0	A				
320	Hamilton St / Division St	TWSC	SBR	34	0	0	0	0	A				
320	Hamilton St / Division St	TWSC	EBL	0	0	5	0	0	A				
320	Hamilton St / Division St	TWSC	EBR	16	0	5	1	8	A				



Williamsville Operational Analysis

2036 No Mitigation - Ultimate Growth, 35% Auto M.S. - PM Peak

Measures of Effectiveness Details

Node	Location	Control	Mvmt.	Volume (All)	Queue (m)		Stop Delay (s)	Delay (s)	LOS	Critical Mvmt		Intersection	
					50th	95th				Delay	LOS	Delay	LOS
330	Raglan St / Division St	TWSC	NBT	618	60	60	9	14	B	32.0	D	9.3	A
330	Raglan St / Division St	TWSC	NBR	13	60	60	10	11	B				
330	Raglan St / Division St	TWSC	SBL	6	0	0	2	4	A				
330	Raglan St / Division St	TWSC	SBT	393	0	0	0	0	A				
330	Raglan St / Division St	TWSC	WBL	43	5	10	8	18	C				
330	Raglan St / Division St	TWSC	WBR	18	5	10	20	32	D				
340	Elm St / Division St	TWSC	NBL	142	60	60	7	10	A	38.0	E	9.2	A
340	Elm St / Division St	TWSC	NBT	618	60	60	9	14	B				
340	Elm St / Division St	TWSC	SBT	372	0	15	0	1	A				
340	Elm St / Division St	TWSC	SBR	63	0	15	1	3	A				
340	Elm St / Division St	TWSC	EBL	13	5	10	26	38	E				
340	Elm St / Division St	TWSC	EBR	11	5	10	6	13	B				
350	Ellice St / Division St	TWSC	NBT	747	50	55	5	7	A	22.0	C	5.2	A
350	Ellice St / Division St	TWSC	NBR	6	50	55	7	8	A				
350	Ellice St / Division St	TWSC	SBL	2	0	10	4	10	A				
350	Ellice St / Division St	TWSC	SBT	380	0	10	1	1	A				
350	Ellice St / Division St	TWSC	WBL	0	0	5	0	0	A				
350	Ellice St / Division St	TWSC	WBR	13	0	5	11	22	C				
360	Colborne St / Division St	TWSC	NBL	54	140	335	7	11	B	64.0	F	9.9	A
360	Colborne St / Division St	TWSC	NBT	727	140	335	7	12	B				
360	Colborne St / Division St	TWSC	NBR	0	140	335	0	0	A				
360	Colborne St / Division St	TWSC	SBL	6	0	50	2	6	A				
360	Colborne St / Division St	TWSC	SBT	375	0	50	1	3	A				
360	Colborne St / Division St	TWSC	SBR	0	0	50	0	0	A				
360	Colborne St / Division St	TWSC	EBL	14	5	15	52	64	F				
360	Colborne St / Division St	TWSC	EBT	2	5	15	13	22	C				
360	Colborne St / Division St	TWSC	EBR	16	5	15	7	15	B				
360	Colborne St / Division St	TWSC	WBL	0	0	5	0	0	A				
360	Colborne St / Division St	TWSC	WBT	0	0	5	0	0	A				
360	Colborne St / Division St	TWSC	WBR	13	0	5	12	23	C				
370	Queen St / Division St	Signalized	NBT	195	15	70	17	21	C	48.0	D	35.3	D
370	Queen St / Division St	Signalized	NBR	83	15	70	7	16	B				
370	Queen St / Division St	Signalized	SBL	108	45	80	21	31	C				
370	Queen St / Division St	Signalized	SBT	286	45	80	17	24	C				
370	Queen St / Division St	Signalized	WBL	273	75	260	23	38	D				
370	Queen St / Division St	Signalized	WBR	583	75	260	23	48	D				



## Memorandum

**To:** Paige Agnew, Commissioner Community Services  
**From:** Jim Miller, Chief Operating Officer  
**Date:** July 23, 2020  
**Subject:** **Williamsville Main Street  
Utility Infrastructure Management  
Assessment of Intensification**

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We, at Utilities Kingston appreciate the opportunity to provide input into the planning process involving further intensification of the Williamsville area. Our vision at Utilities Kingston focuses on delivering our services for the purpose of building better communities, and we believe working with your group in supporting all types of development will help us achieve that.

As you are aware, the fact that the central part of the City of Kingston is one of the oldest in Canada, resulting in utility system designs that would not be acceptable today creates issues for development and normal day-to-day operations. We have been working diligently to upgrade/replace these systems going back to before amalgamation. Although work continues on all of our services including electricity, natural gas, water, wastewater and fiber optics, the primary service of concern regarding development particularly in this area is wastewater. And this concern is driven by the legacy combined sewer system, and the environmental and regulatory concerns when new load (development) is added to any component of this system.

Focusing on the wastewater system, Utilities Kingston has a number of key projects underway or planned that will assist to facilitate development in the Williamsville area and the overall municipality. These include the completion of the Cataraqui Bay Wastewater Treatment Plant upgrades, the Portsmouth Pumping Station turn around project, upgrades to the Days Road Pumping Station and ongoing separation of the combined system. When all

of these are completed, most concerns for development caused by wastewater servicing capacity will be dealt with.

A key project for the Williamsville area is in the last category of separation of the combined system and is planned for Princess Street above Division Street and scheduled for 2022.

Unfortunately, we cannot just look at this area in isolation of the wastewater system in the old city downtown core, as the addition of customers in one area affects capacity in other areas, such as Queen's and North Kingstown. That is all factored into our calculations and the planning work we do.

So, turning our attention to the intensification of the Williamsville area as you have requested, we offer the following.

Our assessment of the intensification proposed for the Williamsville area is based upon the following conditions and understanding:

1. Data supplied by the City of Kingston Planning Department to Utilities Kingston, received May 27, 2020.
2. Data received and verified is summarized into the following facts that have been used in the assessment:
  - a. The City proposes through intensification policies, an increase of 6,900 people in Williamsville, which based on the Planning Departments conversion factor of 2.3 persons per unit yields 3,000 additional units.
  - b. Utilities Kingston acknowledges that 5,020 people (2,183 units) have already been "approved" as an increase to the Williamsville area.
3. Utilities Kingston also acknowledges the receipt of updated data recently received (June 27<sup>th</sup>) that proposes 3,400 units or 7,820 persons

### **Sanitary Sewer**

On October 2, 2018 we confirmed that the known (existing) development projects for Williamsville could be accommodated as specifically listed and that an un-committed capacity allocation of 1,243 people (540 units) would be created as a result of capital construction work involving Alfred and Elm Streets. On September

16, 2019 Planning confirmed the accuracy of these projections, contingent upon completion of the Alfred/Elm work.

The Alfred /Elm work which created the 1,243 person capacity within Williamsville was an interim measure until such time as construction of additional wastewater capacity between Division St and Alfred on Princess Street scheduled for tendering in 2021 and construction in 2022, is completed. Our capacity assessment confirms that these capital wastewater infrastructure upgrades are required to accommodate the additional population proposed by Planning for Williamsville. Utilities Kingston with City Engineering is planning this capital work for the 2021-2022 period. This work will create sufficient capacity to accommodate the planned increase in population within the Williamsville area of between 7,500 to 8,000 persons. The total estimated capital expenditure for wastewater upgrades (only) required to support this level of intensification is estimated to be \$2,000,000.

With regards to dwelling units versus population, from an Engineering perspective people create demand and flows, not units. While we understand that the term “dwelling units” may be meaningful to certain groups when discussing development with others, where utility infrastructure is concerned, consistency in the use of persons is critical to understanding the potential impact of intensification as there can be no mistake in the numbers or assumptions behind those numbers as in how many people per dwelling unit. We believe that Planning is better equipped to translate population to dwelling units, based on specific projects and the types of buildings being proposed.

The forgoing comments address at a high level the Williamsville Area. The following comments address specific areas as identified by the Williamsville Study Area map included in your May 27 submission to Utilities Kingston:

- a. **Area “A”:** The sanitary sewer was rebuilt in this area in 2014 and was designed and sized based on information provided by Planning for the Williamsville District as it stood prior to 2014. This proposed disbursement of population to Area “A” should not be exceeded by any amount beyond that identified in your May 27<sup>th</sup> submission. This is a hard cap on the population increase for Area “A” in regards to sanitary sewer services only. Any exceedance would trigger another reconstruction/ replacement of the sanitary sewer. We

understand and acknowledge that your June 27<sup>th</sup> data actually reduces growth expectations (population) for that area, so that is positive and reduces the concerns for sanitary sewers in AREA “A”

- b. **Areas “BW”, “BE” and “C”:** No particular concerns are identified with respect to sanitary services, subject to normal review comments undertaken at the time of development review.

## Water

The review of the water distribution system from the original Williamsville Main Street Study in 2011 indicated sufficient capacity for the estimated incremental loadings. It was noted in 2011 that multi-story developments may require on-site pump systems to provide adequate pressure and flow for domestic use on upper-level units. Similarly, on-site fire protection measures were identified as potentially being required. These requirements are not specific to Williamsville and depending on elevations and building height may be required at any location within our water distribution system. This should not be seen in any way as a servicing limitation from Utilities Kingston’s perspective as there is sufficient pressure and flow on our system to service these developments, it just may necessitate additional expense by the developer depending on building height.

The May 27<sup>th</sup> data submission has been reviewed and raises no particular concerns relative to provision of potable water for typical design flows associated with domestic loadings. However, as usual, each specific proposal will need to be evaluated on a case-by-case basis, during the planning approvals process.

As a result of recent changes to the Building Code regarding wood frame construction, we offer the following observations for consideration:

- **Area “A”** within Williamsville represents a “higher risk” area where the supply of water **may not** be sufficient to meet fire flows demands for multi-story wood constructed buildings. Please note this is a general observation/statement and not a definitive answer. Each site, the characteristics of each specific development and the proximity to other buildings create unique circumstances that require specific analysis

for fire flow demands. We would recommend that guidance to proponents in Area “A” should be offered early in the process that wood frame construction may trigger additional on-site costs to the proponent to satisfy fire flow demands. Conversely, we do not see any issues with respect to traditional concrete/ steel/ brick construction techniques meeting fire flows in Area “A”.

- **Areas “BW”, “BE” and “C”** are “less” at risk than Area “A”. Utilities Kingston initial assessment suggests the water system may be able to provide sufficient fire flows but exercising some caution is recommended in that each site and the characteristics of each specific development are unique and still require specific analysis for fire flow demands during the planning approvals process

However acknowledging the need for better definition on this issue Utilities Kingston Engineering staff are currently carrying out a conceptual water modelling exercise on our water system in this area to determine what water system improvements would be required to address the 6 storey wood frame building matter to eliminate this concern, in order to provide the required fire flows throughout the Williamsville area.

In summary Utilities Kingston can advise that the water distribution system for Williamsville should be sufficient for the projected population increase. Where development projects involve construction techniques employing brick/concrete/steel etc. we do not foresee any capacity issues throughout the Williamsville Planning Area. Where wood frame construction is being proposed the additional capacity demand triggered by that construction technique is a concern that would require review during the planning approvals process. As noted, Area “A” presents higher risks for wood frame projects than Areas “BE”, “BW” and “C”.

## **Gas**

The existing natural gas system should be able to handle the ‘Ultimate Development Scenario’ loadings but further review would be required when a Site Plan Application and the associated supporting studies are received as it would vary with the size of the building and the amount of gas loading required. Utilities Kingston will work with each developer to provide the necessary servicing.

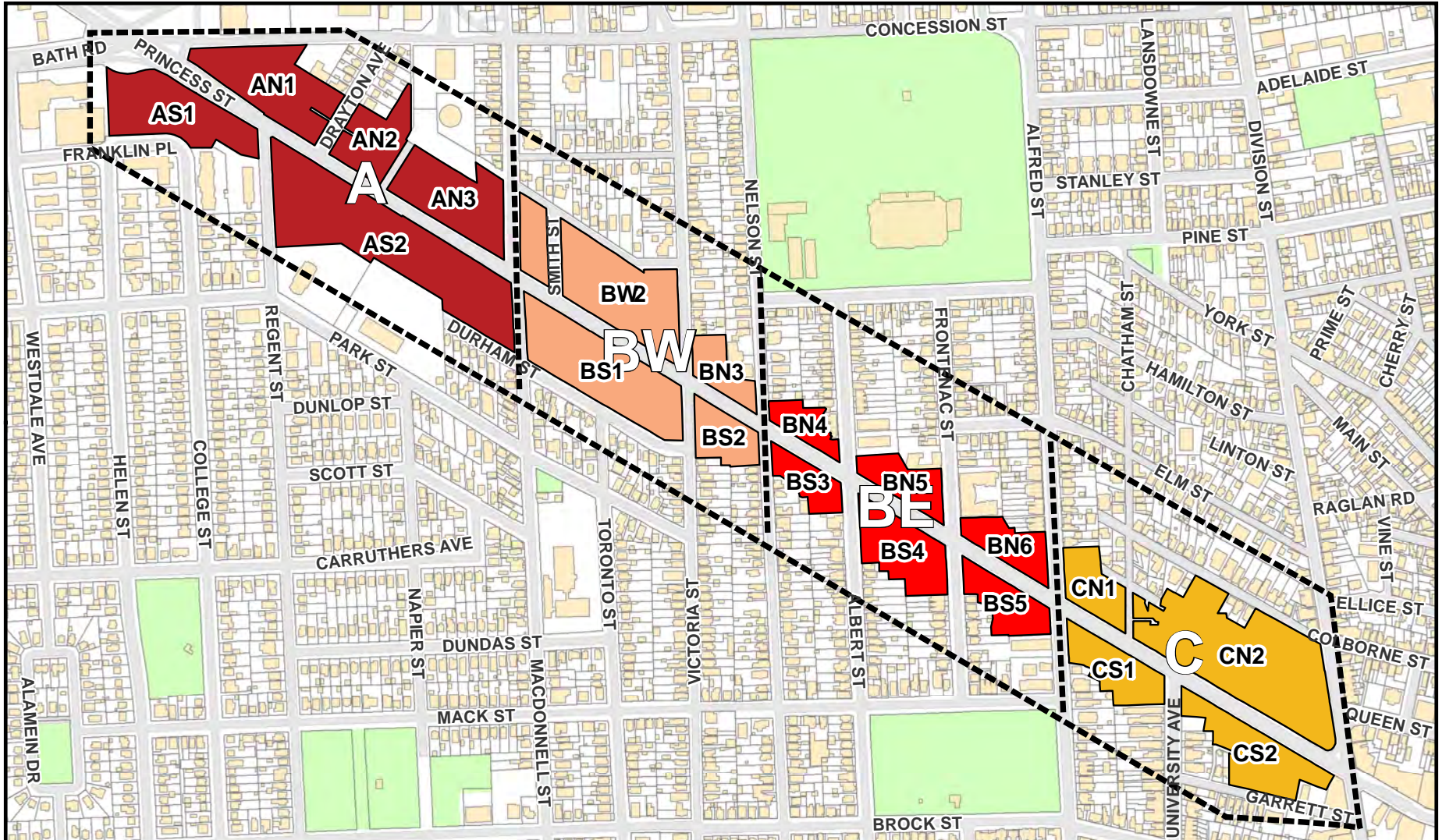




## **Electric**

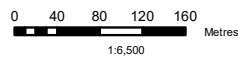
We acknowledge receipt of the unit projections for the 'Ultimate Development Scenario' submitted in May and commit to provide the necessary capacity to service this build out. Due to the detailed regulatory requirements for long term system planning and rate approvals by the provincial Ontario Energy Board, it will be critical to ensure open and ongoing communication and discussions between our two groups to ensure we can have the necessary approvals and infrastructure in place when required. In summary we realize there is a lot of detailed information provided in this correspondence. At a high-level following completion of the noted system improvements we do not see any concern for gas, electric, and sewer servicing for the projected population numbers provided. Our concern remains with current water servicing (fire flows) where wood construction is being utilized and we are working to determine necessary improvements to alleviate these concerns. Should there be questions and/or concerns please contact us as a discussion will likely provide more value than ongoing email discussions.

Utilities Kingston looks forward to working with you and other City of Kingston departments in facilitating this positive change to our City.



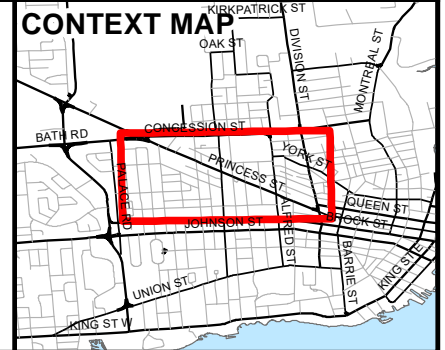
CITY OF KINGSTON  
**Williamsville Study Area**

Division Street to Bath Road



**Legend**

□ Williamsville Blocks



PREPARED BY: akeeping  
DATE: 2020-05-26

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# Memorandum

<b>To</b>	Paige Agnew, Andrea Gummo
<b>From</b>	Erik Karvinen
<b>Date</b>	May 6, 2020
<b>Re:</b>	Feasibility Assessment – Purpose-Built Rental Apartment Development for Williamsville

Fax  Courier  Mail  Email

Watson & Associates Economists Ltd. (Watson) was retained by the City of Kingston to prepare a High Density Residential Pro Forma analysis study. The study is intended to help inform the City on the financial feasibility of new construction of private-sector purpose-built housing and opportunities and challenges that exist through the lens of a prototypical development model. The project involves the assessment of the Williamsville site.

Understanding the market feasibility of residential development within the subject sites is a critical element of this assignment. As part of this analysis, Watson is providing a detailed examination of the potential market feasibility (based on typical local development costs and revenues) associated with the development scenarios identified. This assignment is intended to evaluate and test the financial viability of the proposed developments within the context of the local policy planning framework.

The following summarizes key findings to-date related to the pro forma analysis for Williamsville.

## Williamsville - Development Parameters of Four Scenarios

In consultation with City staff, four purpose-built apartment development scenarios were prepared for the Williamsville site analysis adapted from conceptual plans based on SketchUp modelling prepared by the City:

- Scenario 1a – Williamsville Corridor Site six storey precast concrete purpose-built rental apartment with ground floor retail;
- Scenario 1b - Williamsville Corridor Site six storey wood frame construction purpose-built rental apartment with ground floor retail;
- Scenario 2a - Block Consolidation – Williamsville Corridor Site six storey precast concrete purpose-built apartment with ground floor retail; and







- Scenario 2b - Block Consolidation – Williamsville Corridor Site six storey wood frame construction purpose-built apartment with ground floor retail.

All scenarios assume one parking space per residential unit while no parking spaces for non-residential component are assumed. All scenarios assume underground parking.

The development parameters and characteristics of the four project scenarios are summarized in Figure 1.

Figure 1 – Development Parameters of Williamsville Development Scenarios

Parameter		Scenario			
		Williamsville Corridor Site		Block Consolidation – Williamsville Corridor Site	
		1a - Precast Concrete	1b - Wood Frame	2a - Precast Concrete	2b - Wood Frame
Parcel Size (Ha)		0.09	0.09	0.25	0.25
Residential Units					
Unit Type	Unit Size (sq.ft)	Number of Units			
Bachelor	425	9 (33%)	9 (33%)	29 (31%)	29 (31%)
1 Bedroom	646	5 (19%)	5 (19%)	19 (20%)	19 (20%)
2 Bedroom	861	9 (33%)	9 (33%)	29 (31%)	29 (31%)
3 Bedroom	1,076	4 (15%)	4 (15%)	14 (15%)	14 (15%)
4 Bedroom	1,292	0 (0%)	0 (0%)	4 (4%)	4 (4%)
<b>Total Units</b>		<b>27</b>	<b>27</b>	<b>95</b>	<b>95</b>
Building Area by Type of Use					
Building Area Type		New Development			
Residential G.L.A. (sq.ft.)		19,400	19,400	71,600	71,600
Office G.L.A. (sq.ft.)		0	0	0	0
Retail G.L.A. (sq.ft.)		1,700	1,700	6,900	6,900
Common Area (sq.ft.)		5,000	5,000	18,800	18,800
<b>Total Building G.F.A. (sq.ft.)</b>		<b>26,100</b>	<b>26,100</b>	<b>97,300</b>	<b>97,300</b>
F.S.I.		2.9	2.9	3.7	3.7
Building Height (# of Floors)		6	6	6	6
Parking Type		Underground	Underground	Underground	Underground
Parking Spaces		27	27	95	95

Source: Watson & Associates Economists Ltd., 2020.

## Development Scenarios Financial Analysis

The economic viability and investment potential of the development scenarios identified above are examined herein through a residential purpose-built pro forma. This is presented through the assessment of the cost of development, operating costs of the



various development scenarios, along with potential revenue streams and return on investment, as outlined below.<sup>1</sup> For each development scenario, a 25-year cash flow was prepared to assess financial viability.

The varying development scenarios provide the basis for a sensitivity analysis where the market impact of potential changes in the planning framework on market feasibility can be assessed.

This financial assessment was prepared through a private-sector developer lens, utilizing a return on investment (R.O.I.) analysis and an estimate of Internal Rate of Return (I.R.R.) and net present (N.P.V.) assuming an industry average discount rate. A corresponding Residual Land Value (R.L.V.) for the scenarios was also prepared which assessed the maximum price/cost of the land parcel (land acquisition) that a developer would be willing to absorb to achieve the minimum acceptable return on investment. The following provides a summary of the pro forma analysis with more detailed tables provided in Attachment 1.

### Potential Revenue

The residential revenue generation potential by building space type is illustrated in Figure 2. The scenarios assume high-quality new build and amenities offered, the development are anticipated to achieve relatively high rental premiums. Based on a review of new purpose-built rentals in mid-town Kingston an estimate of base year rents and rental revenue by unit type for the prototypical development was derived.

As illustrated in Figure 2, it is assumed that in the first year of occupancy, average market rents will range between \$1,200 and \$2,397 per month. Based on the assumed average size of units (G.L.A.), this represents a rental rate of \$2.82 per sq.ft. for the bachelor units, \$2.38 per sq.ft. for the 1-bedroom units, \$2.25 per sq.ft. for the 2-bedroom units, \$2.06 for the 3-bedroom units and \$1.86 per sq.ft. for 4-bedroom units. The analysis also assumes the parking spaces and lockers would be rented out at \$100 and \$25 per month, respectively.

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<sup>1</sup> The cost of development, operating costs and revenue streams are based on data derived from developments of similar typology within the local market. The actual developer cost variables and revenue generation may differ.



Figure 2: Market Rent Assumptions for Purpose-Built Rental Residential Units by Unit Size

Unit Type	Average Unit Size (sq.ft.)	Monthly Rental Rate	Monthly Rent per sq.ft.
Bachelor	425	\$1,200	\$2.82
1 Bedroom	646	\$1,535	\$2.38
2 Bedroom	861	\$1,941	\$2.25
3 Bedroom	1,076	\$2,212	\$2.06
4 Bedroom	1,292	\$2,397	\$1.86

Source: Based on local market data derived by Watson & Associates Economists Ltd., 2020.

For all scenarios, it is assumed that the retail and office space identified would be leased out with net market rents of \$25 per sq.ft. and \$15 per sq.ft., respectively, as illustrated in Figure 3.

The market rents for office and retail space are consistent with current market values for comparable developments in the City of Kingston downtown market area.

Figure 3 – Non-Residential Space Rents

Non-Residential Space	Net Rental Rate per sq.ft.
Retail	\$25
Office	\$15

Source: Based on local market data derived by Watson & Associates Economists Ltd., 2020.

Utilizing the rental revenue data identified above, revenue streams from the long-term lease of residential space (under purpose built rental scenario) was determined. Annual revenue from the long-term lease of non-residential space was also calculated. The rental revenue analysis reflects a stabilized vacancy rate of 3% and 5% for residential and non-residential space, respectively, and market rents are assumed to appreciate by 2% annually over the course of the 25-year cash flow period.<sup>1</sup>

### Development Costs

The development scenarios are subject to an assessment of total development cost by using various cost component inputs, as identified below:

- Land Cost – based on market value from a survey of recent sales transactions along Princess Street in Williamsville;

<sup>1</sup> It is assumed that in the first year of occupancy (Year 2), a vacancy rate of 50% (“lease up” period). Once full operations are achieved (Year 3 onward), a 3% vacancy is assumed.



- Construction Costs – reflects hard construction costs (e.g. materials, labour) and soft costs (e.g. engineering, consulting services), based on local data;<sup>1</sup>
- Development Charges – on a sq.ft. basis, as per local development charge schedules;
- Parkland Dedication – “cash-in-lieu of parkland” dedication on a sq.ft. basis as per local by-law and calculated at market price of land;
- Building Permit Fees – on a sq.ft. basis as per local by-laws;
- Planning Fees – includes charges for a Rezoning, Official Plan amendment and Site Plan Control application; and
- Site Preparation – Reflects servicing, demolition and other various costs related to preparation of a site which may be required. Based on Watson estimate.

In accordance with the development cost assumptions above and the development parameters identified in Figure 1, the total development cost of the purpose-built rental scenarios are summarized in Figure 4. As shown:

- Development costs for the purpose-built rental scenarios range between \$9.4 million and \$33.1 million;
- Approximately 79% to 81% of the development cost is attributed to construction cost, varying by scenario. Land costs account for 11% to 13%, and all remaining costs (development charges, parkland dedication, building permit fees/planning fees, site preparation and contingency) account for approximately 8% of total; and
- Wood frame developments have a lower cost of development than comparable precast concrete developments.

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<sup>1</sup> The analysis contained herein has assumed conventional building materials and methods utilizing concrete in the construction cost assumptions for Scenarios 1a and 2a. Building construction cost data derived from RSMeans 2019 Construction Cost data and reflects pre-cast concrete construction of a mid-rise apartment building. Scenarios 1b and 2b (wood frame construction) construction cost reflects a modified cost per sq.ft. based on industry-wide cost differentials between pre-cast concrete and comparable wood frame construction.





Figure 4: Prototypical Purpose-Built Rental Development – Total Development Costs

Type of Cost	Scenario							
	Williamsville Corridor Site				Block Consolidation Williamsville Corridor Site			
	1a - Precast Concrete		1b - Wood Frame		2a - Precast Concrete		2b - Wood Frame	
	\$ (Millions)	(%)	\$ (Millions)	(%)	\$ (Millions)	(%)	\$ (Millions)	(%)
Construction Cost	\$7.9	80%	\$7.4	79%	\$27.0	81%	\$25.0	80%
Land Cost	\$1.2	13%	\$1.2	13%	\$3.6	11%	\$3.6	12%
Development Charges	\$0.4	4%	\$0.4	4%	\$1.3	4%	\$1.3	4%
Parkland Dedication	\$0.1	<1%	\$0.1	<1%	\$0.2	<1%	\$0.2	<1%
Building Permit Fees / Planning Fees	\$0.1	<1%	\$0.1	<1%	\$0.2	<1%	\$0.2	<1%
Site Preparation	\$0.1	1%	\$0.1	1%	\$0.3	1%	\$0.3	1%
Contingency	\$0.2	2%	\$0.2	2%	\$0.6	2%	\$0.6	2%
<b>Total Cost</b>	<b>\$9.9</b>	<b>100%</b>	<b>\$9.4</b>	<b>100%</b>	<b>\$33.1</b>	<b>100%</b>	<b>\$31.2</b>	<b>100%</b>

Source: Watson & Associates Economists Ltd., 2020.

### Purpose Built Rental Financing and Operating Costs

The development scenarios assume that the rental units will be leased out over the 25-year analysis period. This is expected to incur the following annual costs for the landlord (developer):

**Financing Costs** – Assumes a 25-year loan for an amount equal to 85% of total development cost (15% developer equity) at an interest rate of 3.35%<sup>1</sup>. Includes CMHC mortgage insurance of 4.75% on the value of the mortgage.

**Operating Costs** – The analysis includes a range of annual operating costs that are the responsibility of the landlord through the 25-year period:

- Management, Operations, Utilities and Maintenance – This reflects property management and operations costs as well as utilities costs (i.e. heat, electricity, water), property insurance, repairs/maintenance and marketing/advertising, as well as capital reserve requirements. A base yearly cost of 25% of revenue is assumed for the residential portion of the development and 3% for the non-residential portion, reflecting industry averages.<sup>2</sup>
- Property Taxes – Property taxes are based on anticipated City of Kingston current local tax rates for new multi-family purpose-built rental

<sup>1</sup> Interest rate calculation based on CMHC Rental Construction Financing Sheet. Applicants are qualified for a 100 bps (1.00%) spread over the CMHC indicative 10 year fixed year. The Government of Canada 10-year benchmark bond yield is 2.33% on February 2018 and is rounded to 2.35%. Due to current market uncertainty a grounded rate from historical periods was used.

<sup>2</sup> Base year costs derived from a number of industry sources including 2018 NAA Survey of Operating Income & Expenses in Rental Apartment Communities.



developments with annual property taxes estimated based on assessment values which are generally based on BMA reporting for comparable properties for the City of Kingston.<sup>1</sup>

As presented in Figure 5, annual financing and operating costs are expected to total between \$0.7 million and \$2.5 million in Year 3. Approximately 69% to 71% of the annual cost is attributed to financing costs, varying by scenario. In comparison, maintenance, utilities, insurance and capital expenses account for between 21% and 23% while property taxes account from 8% to 9%.

Figure 5: Prototypical Purpose-Built Rental Development – Annual Financing and Operating Costs in Year 3 (Stabilized)

Type of Cost	Scenario							
	Williamsville Corridor Site				Block Consolidation Williamsville Corridor Site			
	1a - Precast Concrete		1b - Wood Frame		2a - Precast Concrete		2b - Wood Frame	
	\$ (Millions)	(%)	\$ (Millions)	(%)	\$ (Millions)	(%)	\$ (Millions)	(%)
Maintenance, Utilities, Insurance and Capital Expenses	\$0.2	21%	\$0.2	22%	\$0.5	21%	\$0.5	23%
Property Taxes	\$0.1	8%	\$0.1	8%	\$0.2	9%	\$0.2	9%
Financing Costs	\$0.5	71%	\$0.5	70%	\$1.7	70%	\$1.6	69%
<b>Total Cost</b>	<b>\$0.7</b>	<b>100%</b>	<b>\$0.7</b>	<b>100%</b>	<b>\$2.5</b>	<b>100%</b>	<b>\$2.4</b>	<b>100%</b>

Source: Watson & Associates Economists Ltd., 2020.

## Cash Flow Analysis and Return on Investment

Utilizing the development costs and operating costs, along with the potential revenue streams identified above, a 25-year cash flow analysis was prepared for each development scenario, with detailed cash flow tables which are presented in Attachment 1. The forecast cash flow analysis is summarized as an Internal Rate of Return (I.R.R.) for the projects utilizing a discount rate of 10% as well as a Residual Land Value (R.L.V.) analysis. The findings of this analysis are summarized below.

### Internal Rate of Return

A project is considered financially feasible if the project generates an I.R.R. of between 10-15%. For the purposes of this analysis, a minimum 10% I.R.R. is used as the threshold for feasibility. The results of this analysis for purpose-built rental scenarios is presented in Figure 8. Key observations:

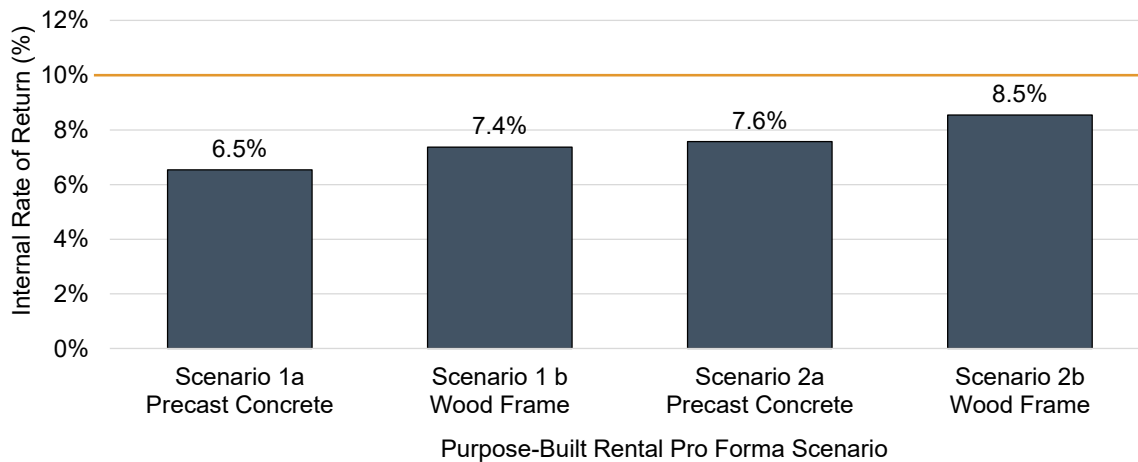
- The I.R.R. ranges from 6.5% to 8.5%, with the feasibility in all scenarios being below the minimum 10% I.R.R. threshold;

<sup>1</sup> Based on 2019 Municipal Study by BMA Management Consulting Inc.



- Wood frame developments generate a notably higher I.R.R. than comparable precast concrete developments; and
- Scenario 2 (Block Consolidation – Williamsville Corridor Site) has a more favourable financial feasibility than Scenario 1 (Williamsville Corridor Site) because it is a larger development and benefits from economies of scale.

Figure 6 - Purpose Built Rental Development Scenarios Internal Rate of Return



Source: Watson & Associates Economists Ltd., 2020.

### Residual Land Value Analysis

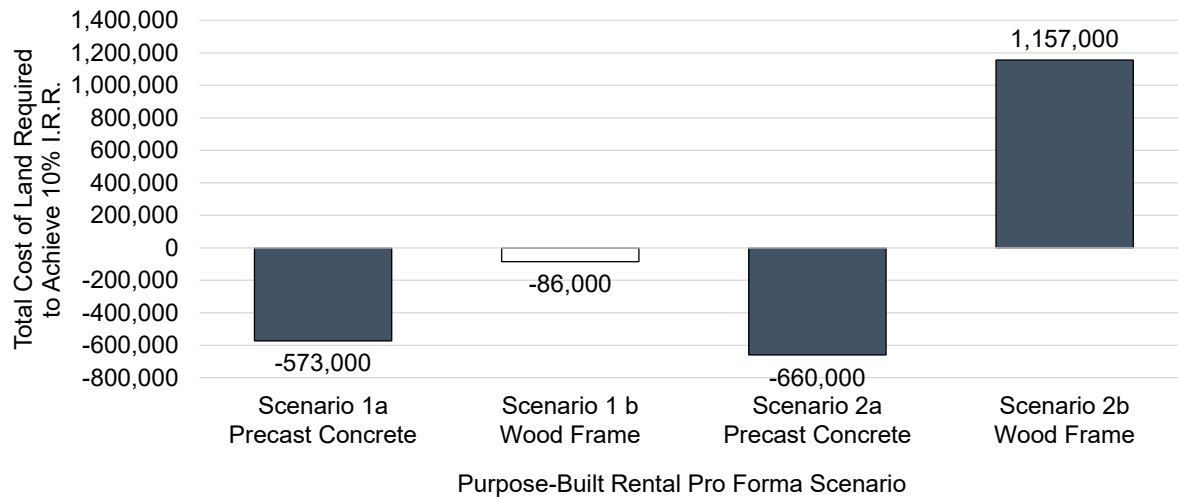
A residual land value analysis was prepared for the scenarios discussed above, in order to estimate the market value of the land assuming a 10% I.R.R. Using a residual land value analysis, the potential revenue valuation is compared to the sum of the development costs. The residual is the value associated with the investment in the land.

The residual value (R.L.V.) of the land for the purpose-built rental development scenarios are presented in Figure 7. Key observations include:

- Scenarios 1a, 1b and 2a generate a negative R.L.V. under a purpose-built rental model, meaning that the developer would assign a negative value to the land and would not pursue the project even if land costs were 0; and
- Scenario 2b generates a positive R.L.V. for the land of \$1.2 million. This suggests that the developer would pay up to \$1.2 million for the land component.



Figure 7 – Purpose Built Rental Development Scenarios Residual Land Value Analysis  
 Total Cost of Land Required to Achieve 10% IRR



Source: Watson & Associates Economists Ltd., 2020.



# Attachment 1

**Scenario 1a - Williamsville Corridor Site, Precast Concrete**  
**City of Kingston High Density Residential Feasibility Assessment and Sensitivity Analysis**  
**Williamsville - 6 Storey Purpose-Built Rental, Ground Floor Retail and Underground Parking**

DRAFT

**Development Financial Indicators**

<b>Internal Rate of Return</b>	<b>6.5%</b>	<b>Net Present Value</b>	<b>-\$1,508,000</b>	<b>Average Cash on Cash Return</b>	<b>-3.6%</b>
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**Development Parameters**

Parcel Size (ha)	0.1
Number of Storeys	6
Building GFA	26,100
<b>Gross Leasable Area (sq.ft.)</b>	
<b>New Development</b>	
Residential	19,400
Office	0
Retail	1,700
Structured Parking	0
Common Area	5,000
<b>Total</b>	<b>26,100</b>

Floor Space Index	2.9
Residential Units	27
Parking Type	Underground
Parking Spaces	27
Project Discount Rate	10%

**Development Costs**

Construction Cost <sup>1</sup>	\$7,885,697
Land Cost	\$1,239,233
Development Charges <sup>2</sup>	\$357,041
Parkland Dedication <sup>3</sup>	\$64,446
Planning Fees <sup>4</sup>	\$24,490
Building Permit Fees <sup>5</sup>	\$36,096
Site Preparation	\$100,643
<b>Total Development Cost</b>	<b>\$9,707,646</b>
Contingency	\$194,153
<b>Total Development Cost with Contingency</b>	<b>\$9,901,799</b>

**Annual Operating Costs<sup>6</sup>**

Maintenance, Utilities, Insurance and Capital Expenses	\$142,745
Property Taxes	\$58,021

**Annual Financing Costs**

Financing Costs	\$519,865
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**Residential Unit Specifications**

	Units	Unit Size (sq.ft.)	Monthly Rental Rate	Annual Revenue <sup>7</sup>
<b>Bachelor</b>	9	425	\$1,200	\$129,583
<b>1 Bedroom</b>	5	646	\$1,535	\$92,101
<b>1 Bedroom + Den</b>	0	753	\$1,791	\$0
<b>2 Bedroom</b>	9	861	\$1,941	\$209,616
<b>2 Bedroom + Den</b>	0	969	\$2,183	\$0
<b>3 Bedroom</b>	4	1,076	\$2,212	\$106,200
<b>4 Bedroom</b>	0	1,292	\$2,397	\$0
<b>Parking Rental</b>	27		\$100	\$32,400
<b>Storage Rental</b>	27		\$25	\$8,100

**Non-Residential Specifications**

	Leasable Area	Net Rental Rate (sq.ft.)	Annual Revenue <sup>7</sup>
<b>Retail</b>	1,700	\$25	\$45,043
<b>Office</b>	0	\$15	\$0

**Vacancy Rates**

Residential Vacancy Rates	3%
Retail/Office Vacancy Rates	5%

<sup>1</sup> Construction costs derived from 2019 RSMeans construction cost data.

<sup>2</sup> Reflects City and Education development charges effective December 2019.

<sup>3</sup> Reflects Municipal Parkland Dedication By-law 2013-107, updated January 26, 2016.

<sup>4</sup> Reflects Municipal Building Permit By-laws effective January 1, 2020.

<sup>5</sup> Reflects Municipal Planning Fees effective January 1, 2020.

<sup>6</sup> Annual operating cost presented is for year 1 of the development.

<sup>7</sup> Rental revenue presented is for year 1 of the development with inflation applied to all subsequent years. Rental revenue presented is not adjusted for vacancy rates which the financial indicators take into account.

Source: Watson & Associates Economists Ltd., 2020.

**Scenario 1b - Williamsville Corridor Site, Wood Frame**  
**City of Kingston High Density Residential Feasibility Assessment and Sensitivity Analysis**  
**Williamsville - 6 Storey Purpose-Built Rental, Ground Floor Retail and Underground Parking**

DRAFT

**Development Financial Indicators**

<b>Internal Rate of Return</b>	<b>7.4%</b>	<b>Net Present Value</b>	<b>-\$1,103,000</b>	<b>Average Cash on Cash Return</b>	<b>-1.5%</b>
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**Development Parameters**

Parcel Size (ha)	0.1
Number of Storeys	6
Building GFA	26,100
<b>Gross Leasable Area (sq.ft.)</b>	
<b>New Development</b>	
Residential	19,400
Office	0
Retail	1,700
Structured Parking	0
Common Area	5,000
<b>Total</b>	<b>26,100</b>

Floor Space Index	2.9
Residential Units	27
Parking Type	Underground
Parking Spaces	27
Project Discount Rate	10%

**Development Costs**

Construction Cost <sup>1</sup>	\$7,367,581
Land Cost	\$1,239,233
Development Charges <sup>2</sup>	\$357,041
Parkland Dedication <sup>3</sup>	\$64,446
Planning Fees <sup>4</sup>	\$24,490
Building Permit Fees <sup>5</sup>	\$36,096
Site Preparation	\$100,643
<b>Total Development Cost</b>	<b>\$9,189,530</b>
Contingency	\$183,791
<b>Total Development Cost with Contingency</b>	<b>\$9,373,320</b>

**Annual Operating Costs<sup>6</sup>**

Maintenance, Utilities, Insurance and Capital Expenses	\$142,745
Property Taxes	\$54,604

**Annual Financing Costs**

Financing Costs	\$492,119
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**Residential Unit Specifications**

	Units	Unit Size (sq.ft.)	Monthly Rental Rate	Annual Revenue <sup>7</sup>
<b>Bachelor</b>	9	425	\$1,200	\$129,583
<b>1 Bedroom</b>	5	646	\$1,535	\$92,101
<b>1 Bedroom + Den</b>	0	753	\$1,791	\$0
<b>2 Bedroom</b>	9	861	\$1,941	\$209,616
<b>2 Bedroom + Den</b>	0	969	\$2,183	\$0
<b>3 Bedroom</b>	4	1,076	\$2,212	\$106,200
<b>4 Bedroom</b>	0	1,292	\$2,397	\$0
<b>Parking Rental</b>	27		\$100	\$32,400
<b>Storage Rental</b>	27		\$25	\$8,100

**Non-Residential Specifications**

	Leasable Area	Net Rental Rate (sq.ft.)	Annual Revenue <sup>7</sup>
<b>Retail</b>	1,700	\$25	\$45,043
<b>Office</b>	0	\$15	\$0

**Vacancy Rates**

Residential Vacancy Rates	3%
Retail/Office Vacancy Rates	5%

<sup>1</sup> Construction costs derived from 2019 RSMeans construction cost data.

<sup>2</sup> Reflects City and Education development charges effective December 2019.

<sup>3</sup> Reflects Municipal Parkland Dedication By-law 2013-107, updated January 26, 2016.

<sup>4</sup> Reflects Municipal Building Permit By-laws effective January 1, 2020.

<sup>5</sup> Reflects Municipal Planning Fees effective January 1, 2020.

<sup>6</sup> Annual operating cost presented is for year 1 of the development.

<sup>7</sup> Rental revenue presented is for year 1 of the development with inflation applied to all subsequent years. Rental revenue presented is not adjusted for vacancy rates which the financial indicators take into account.

Source: Watson & Associates Economists Ltd., 2020.



**Scenario 2a - Block Consolidation – Williamsville Corridor Site, Precast Concrete**  
**City of Kingston High Density Residential Feasibility Assessment and Sensitivity Analysis**  
**Williamsville - 6 Storey Purpose-Built Rental, Ground Floor Retail and Underground Parking**

DRAFT

**Development Financial Indicators**

<b>Internal Rate of Return</b>	<b>7.6%</b>	<b>Net Present Value</b>	<b>-\$3,597,000</b>	<b>Average Cash on Cash Return</b>	<b>-1.0%</b>
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**Development Parameters**

Parcel Size (ha)	0.2
Number of Storeys	6
Building GFA	97,300
<b>Gross Leasable Area (sq.ft.)</b>	
<b>New Development</b>	
Residential	71,600
Office	0
Retail	6,900
Structured Parking	0
Common Area	18,800
<b>Total</b>	<b>97,300</b>

Floor Space Index	3.7
Residential Units	95
Parking Type	Underground
Parking Spaces	95
Project Discount Rate	10%

**Development Costs**

Construction Cost <sup>1</sup>	\$26,958,134
Land Cost	\$3,599,012
Development Charges <sup>2</sup>	\$1,287,016
Parkland Dedication <sup>3</sup>	\$187,795
Planning Fees <sup>4</sup>	\$39,508
Building Permit Fees <sup>5</sup>	\$134,861
Site Preparation	\$292,292
<b>Total Development Cost</b>	<b>\$32,498,619</b>
Contingency	\$649,972
<b>Total Development Cost with Contingency</b>	<b>\$33,148,591</b>

**Annual Operating Costs<sup>6</sup>**

Maintenance, Utilities, Insurance and Capital Expenses	\$506,422
Property Taxes	\$218,248

**Annual Financing Costs**

Financing Costs	\$1,740,371
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**Residential Unit Specifications**

	Units	Unit Size (sq.ft.)	Monthly Rental Rate	Annual Revenue <sup>7</sup>
<b>Bachelor</b>	29	425	\$1,200	\$417,545
<b>1 Bedroom</b>	19	646	\$1,535	\$349,984
<b>1 Bedroom + Den</b>	0	753	\$1,791	\$0
<b>2 Bedroom</b>	29	861	\$1,941	\$675,428
<b>2 Bedroom + Den</b>	0	969	\$2,183	\$0
<b>3 Bedroom</b>	14	1,076	\$2,212	\$371,699
<b>4 Bedroom</b>	4	1,292	\$2,397	\$115,078
<b>Parking Rental</b>	95		\$100	\$114,000
<b>Storage Rental</b>	95		\$25	\$28,500

**Non-Residential Specifications**

	Leasable Area	Net Rental Rate (sq.ft.)	Annual Revenue <sup>7</sup>
<b>Retail Office</b>	6,900	\$25	\$182,741
	0	\$15	\$0

**Vacancy Rates**

Residential Vacancy Rates	3%
Retail/Office Vacancy Rates	5%

<sup>1</sup> Construction costs derived from 2019 RSMeans construction cost data.

<sup>2</sup> Reflects City and Education development charges effective December 2019.

<sup>3</sup> Reflects Municipal Parkland Dedication By-law 2013-107, updated January 26, 2016.

<sup>4</sup> Reflects Municipal Building Permit By-laws effective January 1, 2020.

<sup>5</sup> Reflects Municipal Planning Fees effective January 1, 2020.

<sup>6</sup> Annual operating cost presented is for year 1 of the development.

<sup>7</sup> Rental revenue presented is for year 1 of the development with inflation applied to all subsequent years. Rental revenue presented is not adjusted for vacancy rates which the financial indicators take into account.

Note: There is a mismatch between the modelling of the building and the parcel size. The parcel size has been adjusted to reflect 80% floorplate coverage.

Source: Watson & Associates Economists Ltd., 2020.

**Scenario 2b - Block Consolidation – Williamsville Corridor Site, Wood Frame**  
**City of Kingston High Density Residential Feasibility Assessment and Sensitivity Analysis**  
**Williamsville - 6 Storey Purpose-Built Rental, Ground Floor Retail and Underground Parking**

DRAFT

**Development Financial Indicators**

<b>Internal Rate of Return</b>	<b>8.5%</b>	<b>Net Present Value</b>	<b>-\$2,062,000</b>	<b>Average Cash on Cash Return</b>	<b>1.5%</b>
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**Development Parameters**

Parcel Size (ha)	0.2
Number of Storeys	6
Building GFA	97,300
<b>Gross Leasable Area (sq.ft.)</b>	
<b>New Development</b>	
Residential	71,600
Office	0
Retail	6,900
Structured Parking	0
Common Area	18,800
<b>Total</b>	<b>97,300</b>

Floor Space Index	3.7
Residential Units	95
Parking Type	Underground
Parking Spaces	95
Project Discount Rate	10%

**Development Costs**

Construction Cost <sup>1</sup>	\$25,024,575
Land Cost	\$3,599,012
Development Charges <sup>2</sup>	\$1,287,016
Parkland Dedication <sup>3</sup>	\$187,795
Planning Fees <sup>4</sup>	\$39,508
Building Permit Fees <sup>5</sup>	\$134,861
Site Preparation	\$292,292
<b>Total Development Cost</b>	<b>\$30,565,059</b>
Contingency	\$611,301
<b>Total Development Cost with Contingency</b>	<b>\$31,176,361</b>

**Annual Operating Costs<sup>6</sup>**

Maintenance, Utilities, Insurance and Capital Expenses	\$506,422
Property Taxes	\$203,884

**Annual Financing Costs**

Financing Costs	\$1,636,825
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**Residential Unit Specifications**

	Units	Unit Size (sq.ft.)	Monthly Rental Rate	Annual Revenue <sup>7</sup>
<b>Bachelor</b>	29	425	\$1,200	\$417,545
<b>1 Bedroom</b>	19	646	\$1,535	\$349,984
<b>1 Bedroom + Den</b>	0	753	\$1,791	\$0
<b>2 Bedroom</b>	29	861	\$1,941	\$675,428
<b>2 Bedroom + Den</b>	0	969	\$2,183	\$0
<b>3 Bedroom</b>	14	1,076	\$2,212	\$371,699
<b>4 Bedroom</b>	4	1,292	\$2,397	\$115,078
<b>Parking Rental</b>	95		\$100	\$114,000
<b>Storage Rental</b>	95		\$25	\$28,500

**Non-Residential Specifications**

	Leasable Area	Net Rental Rate (sq.ft.)	Annual Revenue <sup>7</sup>
<b>Retail</b>	6,900	\$25	\$182,741
<b>Office</b>	0	\$15	\$0

**Vacancy Rates**

<b>Residential Vacancy Rates</b>	3%
<b>Retail/Office Vacancy Rates</b>	5%

<sup>1</sup> Construction costs derived from 2019 RSMeans construction cost data.

<sup>2</sup> Reflects City and Education development charges effective December 2019.

<sup>3</sup> Reflects Municipal Parkland Dedication By-law 2013-107, updated January 26, 2016.

<sup>4</sup> Reflects Municipal Building Permit By-laws effective January 1, 2020.

<sup>5</sup> Reflects Municipal Planning Fees effective January 1, 2020.

<sup>6</sup> Annual operating cost presented is for year 1 of the development.

<sup>7</sup> Rental revenue presented is for year 1 of the development with inflation applied to all subsequent years. Rental revenue presented is not adjusted for vacancy rates which the financial indicators take into account.

Note: There is a mismatch between the modelling of the building and the parcel size. The parcel size has been adjusted to reflect 80% floorplate coverage.

Source: Watson & Associates Economists Ltd., 2020.

**Appendix D: City of Kingston Official Plan (Excerpt) – Section 10E.1 Princess Street Corridor Specific Policy Area, Williamsville Main Street**

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**10E.1 Williamsville Main Street**

The Williamsville Main Street, which extends between the westerly limit of the Central Business District at Division Street and the Bath Road/Concession Street intersection, is a major component of the Princess Street Corridor, as shown on Schedule 2. It is intended to be a focus of *development* in a pedestrian-oriented form that will provide support for the Princess Street transit corridor and more sustainable means of growth. The Williamsville Main Street is shown on Schedule PS-1 of this Plan.

**Vision**

- 10E.1.1.** The vision for the Williamsville Main Street corridor is a vibrant and active intensification area with a mix of land uses framing an improved, pedestrian-oriented streetscape.

**Guiding Principles**

- 10E.1.2.**
- a. Ensure community vitality through a mix of uses that includes retail/commercial at grade.
  - b. Improve the pedestrian and cyclist experience along Princess Street.
  - c. Identify opportunities to green the public and private realm.
  - d. Guide development at an appropriate scale and density that is compatible with the street width and neighbourhood context.
  - e. Encourage high quality architecture that is representative of the cultural heritage of Williamsville.
  - f. Protect existing residential areas from adverse effects.
  - g. Provide a sustainable framework for future development, including phasing-in of development so that it does not compromise the long-term servicing strategy for Williamsville.

**Policies:**

**Permitted Uses**

- 10E.1.4.** Permitted uses are outlined in Section 3.4C, Main Street Commercial. Ground floor commercial uses are required for properties on Princess Street as shown on Schedule PS-1. Other properties in the area may be developed with a mix of commercial/office and residential at-grade.

### Other Official Plan Policies

- 10E.1.5.** In addition to these area-specific policies, there are other policies of the Official Plan that also apply to the Williamsville Main Street. Where there is a conflict between these area-specific policies and other policies of the Official Plan, these area-specific policies shall prevail.

### Cultural Heritage Resources and Character

- 10E.1.6.** The Williamsville Main Street has an evolving character that will continue to be defined by its role as a main transportation corridor and a priority transit route for the City. New *development* must protect, enhance, support or adaptively re-use cultural heritage resources. The heritage character statement for the Williamsville corridor is as follows: “The Williamsville study area is a linear mixed-use district with land uses and built form largely determined by the evolving nature of Princess Street.” The key heritage character defining element of the corridor is the pattern of streets and blocks determined by the juxtaposition of Princess Street and the existing street grid.

### Transit

- 10E.1.7.** Transit service is important to further growth and *development* within the Williamsville Main Street. The Williamsville Main Street is part of the Princess Street Corridor, which is identified in the Official Plan as a priority transit route and the focus of future *intensification*.

### Urban & Sustainable Design

- 10E.1.8.** New *development* within the Williamsville Main Street shall be designed in accordance with the urban design principles developed through the addendum to the Williamsville Main Street Study (2020). Any application for new *development* will be reviewed during the site plan control review process in terms of its compatibility with the architectural character of the area in which it is located and based on the addendum to the Williamsville Main Street Study (2020).
- 10E.1.9.** Storm water management is required. Buildings and site design shall control the rate of storm water run-off as per the City’s current design criteria.
- 10E.1.10** Green roofs are encouraged for all new *developments*. Where a green roof is also accessible to the building occupants as amenity area, it may be considered by the City as part of a *development’s* required amenity area calculation in the Zoning By-Law. Green roofs can be a combination of landscaped and hardscaped surfaces.

- 10.E.1.11. Buildings and windows should be oriented and designed such that natural means of heating, cooling, ventilating, lighting interior spaces and avoiding intrusive overlook are maximized.
- 10.E.1.12. New development will be sited and designed to optimize pedestrian comfort related to weather, including, but not limited to, precipitation, heat, cold, shadowing, and wind.
- 10.E.1.13. The use of high quality and appropriate exterior building materials at ground level, particularly at the streetwall and areas that are visible from Princess Street, is an important design consideration to help new *development* support the public realm and fit within the planned context for Williamsville. New *development* will utilize primary exterior materials selected for their permanence, durability and energy efficiency.

### Public Realm Design

- 10.E.1.14. Pedestrian movement and the function and aesthetic quality of the street are priorities for the public realm in the corridor, in order to transform the street into an attractive and vibrant destination.
- 10.E.1.15. The setbacks along the street frontages are intended to provide a wider pedestrian realm. A widened pedestrian realm provides room for pedestrian movement, window shopping, chance meetings, retail overflow, small patios, and doorways and building entrances. This area may also include private street furniture, private signage, merchandise displays, and other similar elements.
- 10.E.1.17. Planted and hardscaped areas with the potential for site furnishings, such as benches, secure bicycle parking, and transit shelters are strongly encouraged. Wherever possible, the boulevard should contain a linear planting of street trees in clustered tree trenches to encourage longevity and viability.
- 10.E.1.18. The sidewalk and front façade of *developments* fronting onto Princess Street should generally be continuous, except where building forecourts, gardens, or other public access is required.

### Ground Floor Conditions

- 10.E.1.19. The floor-to-floor height of the ground level must be a minimum of 4.5 metres. This will facilitate commercial uses at grade and will ensure that the ground floor has a continuous character.
- 10.E.1.20. In the case of corner sites, the commercial uses should wrap the corner of the building, occupying a portion of the frontage on the secondary street.

- 10E.1.21.** Entrances for all land uses off of Princess Street, Division Street, Bath Road and Concession Street, as well as any commercial uses that wrap the corner of any side streets off of Princess Street, must be constructed at-grade to be accessible and to allow for viable commercial spaces.
- 10E.1.22.** Where ground floor residential uses are permitted along Princess Street, Division Street, Bath Road, and Concession Street, the building design must contribute to the pedestrian activity and amenity of the street and complement the commercial storefront design and character of the street. Residential uses will include an appropriate transition from the public to private realm. The height of the ground floor units must enable future conversions to commercial uses.
- 10E.1.23.** Where residential uses are proposed on side streets not listed in Section 10E.1.21, each unit shall have an independent pedestrian access. Some entrances may be raised above sidewalk level to provide transition from the public to private realm and/or to provide private amenity space or landscaping to buffer the residential unit from the public realm.
- 10E.1.24.** Canopies, cantilevers, awnings, recessed entrances, covered walkways and porticoes are recommended to provide weather protection to pedestrians and help articulate building elevations.
- 10E.1.25.** To encourage pedestrian interaction and enhance safety, facades facing Princess Street or adjacent to public open spaces shall be composed of large areas of glazing and should occupy a minimum of 60% of the ground floor frontage. The treatment of the ground floor shall be highly transparent with strong visual connections between the street and the ground floor interior spaces. Clear glass is preferable to promote the highest level of visibility. Lifestyle graphics and other forms of images that result in a solid panel behind glazing, or other permanent opaque coverings on windows and doors that prevent views into the ground floor of buildings are not considered glazing for the purpose of this policy. Where a single use retailer occupies the ground floor of a building, it is expected that the majority of the frontage will still be activated by other uses, such as with smaller shops or offices that have individual entrances and street presence.
- 10E.1.26.** Where residential or office uses are included above commercial uses, a separate exterior entrance must be provided at-grade. Long frontages without active entrances are discouraged.

### **Building Width and Articulation**

- 10E.1.27.** Building massing will be articulated or broken up through a continuous rhythm of building fronts achieved through a pattern of projections and recessions, entrances, display spaces, signage, and glazed areas to ensure that facades are not overly wide. The intent is to create the sense

of having multiple buildings along the width of the building. Vertical breaks and setbacks will also be required.

### Streetwall Heights

- 10E.1.28.** New *development* shall support a vibrant pedestrian environment by establishing and maintaining a continuous streetwall that frames Princess Street. New *development* should provide a streetwall height of three to four storeys.
- 10E.1.29.** Where new development is adjacent to existing development on a side street, the new development will reflect the scale of that development in its design and provide for an appropriate built form transition.

### Building Heights

- 10E.1.30.** For the purposes of the Williamsville Main Street Corridor, any building up to 6 storeys in height is considered a mid-rise building, and a building greater than 6 storeys in height is considered to be a tall building.
- a.** Buildings shall be no taller than a 6 storey mid-rise building, unless specifically identified in the height map in Schedule PS-1 as being in an appropriate location for a tall building. Mechanical penthouses, other rooftop mechanical equipment, and architectural appurtenances to support green roofs, other rooftop sustainability elements, and rooftop amenity spaces are not considered to be a storey and may exceed the maximum allowable building height, provided they are appropriately screened and buffered from the street and adjacent residential areas.
  - b.** Where specifically permitted by Schedule PS-1, tall buildings shall have a podium no greater than 6 storeys in height in keeping with the intended form and function of the corridor. The tower portion of such tall building shall be designed in accordance with Section 10E.1.34.
  - c.** New developments must provide for appropriate transitions in height and massing between Princess Street and the adjacent residential areas.
  - d.** The minimum and maximum heights are regulated through the implementing zoning by-law and are intended to represent a firm cap on the height of new buildings.

### Mid-Rise Building Setbacks and Setbacks

- 10E.1.31.** Mid-rise buildings shall be set back from lot lines shared with properties designated for residential use. The intent is to concentrate building



massing near Princess Street and provide physical separation between the new larger development and existing residential uses. This setback will be detailed in the implementing zoning by-law.

- 10E.1.32.** The following policies apply to setbacks of mid-rise buildings:
- a.** Buildings shall include setbacks above the 4<sup>th</sup> floor where a building faces a street.
  - b.** Buildings shall include setbacks above the 2<sup>nd</sup> floor where a building is adjacent to a low-rise residential building and no rear lane as per Section 10E.1.41 is proposed. Notwithstanding the required setbacks, where a building fronting onto Princess Street incorporates a low-rise built form intended to mimic grade related townhouse units, which are no greater than 2-storeys in height and at a maximum depth of 20 metres from the street face, the setbacks to the rear property line may be reduced for the low-rise built form component.
  - c.** Spaces created by building setbacks are encouraged to be used for amenity area and the inclusion of green space.
  - d.** Required setbacks will be detailed in the implementing zoning by-law.
- 10E.1.33.** Along Princess Street, the portion of the building above the streetwall may step back from the side property line(s) adjacent to another building fronting Princess Street to provide space to incorporate window openings. Separation distance between new *development* and existing buildings must be in keeping with the requirements of the Ontario Building Code to allow for sufficient glazing and access to sunlight.

### Tall Buildings

- 10E.1.34.** The following policies apply to tall buildings:
- a.** Tall buildings will be designed with a mid-rise podium to reflect the intent and character of the addendum to the Williamsville Main Street Study (2020). These podiums will incorporate a mix of commercial and residential uses and shall meet all policies of Section 10E.1 that apply to the design of a mid-rise building.
  - b.** The tower component of tall buildings will have a maximum floorplate of 790 square metres.
  - c.** The tower component of tall buildings will be separated from each other by a minimum of 25 metres, measured from the two closest points between the towers. The tower component shall be setback a

minimum of 12.5 metres from the property line of an adjacent property, except where the adjacent property has already been developed with a tall building, such tower may be located closer than 12.5 metres to the property line so long as the 25 metre separation distance between towers is maintained.

- d. Consideration should be given to the location of a tower on a site. Towers will be located as far as possible from adjacent low-rise developments. Additional stepbacks from the top of the mid-rise podium will be required.

### Projections

- 10E.1.35. New *developments* shall not contain balconies that project beyond the face of the building for the first three storeys for all facades that face a street. For clarity, balconies can be inset to provide private amenity space for residents for the first three storeys. Balconies on the rear façade of *developments* may project from the building face above the second storey but should be set back from the rear property line. Balconies of new *developments* shall not encroach into the public road allowance.

### Blank Side Walls

- 10E.1.36. Blank side wall conditions may be acceptable up to a height of four (4) storeys if treated properly. To mitigate the impact of blank walls, they should be designed with a material finish that complements the architectural character of the main building façade. Blank walls are not permitted facing a street, and are only appropriate where they exist near to an existing building or where a future building can reasonably be expected.

### Required Parking

- 10E.1.37. The implementing zoning by-law requires residential parking spaces to be provided at a specific ratio based on the number of dwelling units. The City may support reductions in the required number of residential parking spaces through an application for a minor variance. Such application may seek to provide as few as zero parking spaces for residential units and shall be supported by a Parking Justification Report prepared by a qualified professional demonstrating that the proposed number of spaces is adequate to meet the future anticipated demand and does not impact or place demand on the public parking supply. Such proposals may also consider proposed additional methods to mitigate vehicle ownership and use through features in the building that support multi-modal living.

- 10E.1.38.** The City may support reductions in the required number of non-residential parking spaces through an application for a minor variance if it is supported by a Parking Justification Report prepared by a qualified professional demonstrating that the proposed number of spaces is adequate to meet the future anticipated demand.

### **Structured Parking**

- 10E.1.39.** Any new structured parking facilities will be developed according to the following policies:
- a.** Structured parking that fronts onto Princess Street will be developed with active uses at ground level to provide attractive facades, animate the streetscape, and enhance pedestrian safety.
  - b.** Vehicular access to the parking structure will be located at the rear and/or side of the building away from frontages along Princess Street, wherever possible.
  - c.** Pedestrian entrances for the parking structure should be located adjacent to main building entrances, public streets, or other highly visible locations.
  - d.** Parking structures that front onto secondary streets will be screened from view at sidewalk level and the ground floor level of the building should be enhanced through architectural detailing and landscaping.
  - e.** Structured parking will be designed using the concepts and principles of Crime Prevention Through Environmental Design (CPTED).
  - f.** Structured parking will be designed in such a way as to be able to be repurposed for other uses should the demand for parking decrease. Examples include, but are not limited to, conversions to accommodate more bicycle parking, communal amenity areas, or storage spaces.

### **Surface Parking**

- 10E.1.40.** Any new surface parking facilities will be developed according to the following policies:
- a.** Where surface parking for new *development* is necessary, parking lots should be located at the rear of buildings. Surface parking lots shall not be permitted in front of buildings facing Princess Street or on lots directly abutting Princess Street.

- b. Private surface parking facilities will not be permitted as the primary long-term use of the property.
- c. Planting strips, landscaped traffic islands, and/or paving articulation should be used to define vehicle routes and smaller parking courts that provide pedestrian walkways, improve edge conditions, and minimize the negative visual impact of surface parking.
- d. Landscaping, or other parking area screening devices, should not obstruct the primary building façade or total visibility of the parking area.
- e. Preferential parking for bicycles, energy efficient vehicles, and car-share services are encouraged.
- f. Surface parking will be designed in such a way as to be able to be repurposed for other uses should the demand for parking decrease. Examples include, but are not limited to, space for additional structures, bicycle parking, or outdoor amenity areas.

## Rear Lanes

- 10E.1.41.** Rear lanes may be used to service commercial uses and provide access to structured and below grade parking, and shall be developed in accordance with the following policies:
- a. Rear lanes shall enter and exit onto adjacent side streets.
  - b. New *developments* along Princess Street should seek opportunities to provide continuity to existing adjacent rear lane systems where the lane condition terminates adjacent to the property.
  - c. Where new *developments* occur and lanes are required to provide access to rear lot parking facilities, the primary façade of the building should not face the lane, nor should the primary pedestrian ground level access be provided from a rear lane. This is necessary as it is important to maintain primary ground level access from the street in order to encourage street activity and to facilitate pedestrian movement.
  - d. Where new lanes are provided, a minimum width of 8.0 metres is required to accommodate appropriate vehicular and active transportation access.

## Vehicle Access, Loading and Servicing

- 10E.1.42.** Vehicle access points and loading and servicing areas shall be appropriately located and screened from public view, and shall be developed in accordance with the following policies:
- a. Wherever possible, vehicular access to on-site parking, loading, and servicing facilities shall be provided from side streets and rear lanes, and not from Princess Street.
  - b. Loading and service areas will be screened from prominent public areas and adjacent residential areas.
  - c. Service and drop-off area circulation shall not interfere with accessible pedestrian circulation.
  - d. Servicing and loading areas should be located in a coordinated manner within buildings rather than in adjacent structures or in outdoor areas. Garbage, loading, servicing, and utility functions should be integrated either adjacent to, or within the interior of a building at the rear whenever possible, with access from a rear lane or side street.
  - e. The number of curb cuts shall be reduced along Princess Street, wherever possible. This will increase opportunities for landscaping treatments and street furnishings, while creating continuity and providing safety to the pedestrian environment. New curb cuts are not recommended for *developments* fronting onto Princess Street. All such *developments* should be accessed by existing rear lanes, new rear lanes, side streets, or adjacent properties.

## Servicing Capacity

- 10E.1.43.** The review of a proposed *development* in Williamsville will ensure that the *development* does not compromise the servicing capacity of the area and/or hinder the development of other properties by limiting their access to servicing capacity. The Zoning By-Law may use a holding symbol to ensure the availability of servicing and may contain a maximum density provision to protect the full build out of this area.

The purpose of this density limit is to support the distribution of servicing capacity throughout the corridor, and to ensure that individual projects are not able to claim servicing capacity such that development of adjacent lands would be prohibited or unduly impacted. The limits are included in the zoning provisions to ensure that staff have the ability to recommend variances where appropriate. This is because residential densities measured in units per hectare are not an exact science, and the specific

configuration of a building can greatly impact the calculation. The intent is to ensure that density limits support the appropriate build-out of the corridor without an undue focus on the specific number.

## **Parkettes**

**10E.1.44.** In addition to parks within walking distance of the Williamsville Main Street, such as Victoria Park and the Memorial Centre, future development plans for the main street area are encouraged to include small urban parkettes. As *intensification* occurs, and more people live and work in the area, it is important that the main street be supported by new open spaces that allow residents access to outdoor space, that improve the pedestrian experience of the streetscape, that provide green landscaping where possible, and that bring people to the area.

- a. Parkettes are intended to be small in size, to accommodate intense and all-season uses, and to contain hardscape surfaces and elements, such as sitting areas and public art, and adequate soft landscape planting amenities.
- b. Where publicly accessible open space is required as part of the *development* of private property, this open space would need to be secured through parkland dedication, donation, acquisition, or a combination of these methods.
- c. Parkette features should reinforce the urban street edge and the parkette should be configured to allow for the functional design and placement of public amenities, such as street trees or benches.
- d. The final decision on the design of a parkette, and the facilities or amenities to be included in a parkette, shall be made by the City.

## **Green Streets**

**10E.1.45.** Green streets are defined as tree-lined corridors that create important visual links and enhance active transportation connections between areas within and surrounding the Williamsville Main Street. The City will continue to explore options for green streets treatments with consideration of the priorities for specific locations within the Williamsville Main Street Study.

**Appendix E**  
**Addendum to the Williamsville Main Street Study**  
**Proposed Zoning By-Law Amendment**

**Zoning By-Law Number 8499 (Excerpt) – Section 23C General Provisions for the Williamsville Main Street Commercial Zone “C4”**

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**23C.1** Subject to compliance with the provisions of Section 5, where applicable, the following provisions shall apply in the C4 Zone.

**23C.2 Permitted Uses** – The following uses only shall be permitted in the C4 Zone:

- (a) libraries, art galleries and museums;
- (b) churches, community halls, community centres and parish halls;
- (c) offices and ancillary uses associated with not-for-profit and social service agencies; offices for or in connection with businesses or professions; offices for printing and publishing; for clarity this includes co-working spaces;
- (d) artisans' workshops and creativity centres;
- (e) hospitals, clinics, pharmacies, and medical laboratories;
- (f) retail stores or shops, markets, and bakeries;
- (g) undertakers' establishments;
- (h) banks and credit unions;
- (i) hotels, bars and restaurants, including take-out restaurants;
- (j) multiple family dwellings; row dwellings; supportive housing and special needs housing, including community homes, crisis care shelters, residential care facilities, recovery homes, group homes, and community support houses; co-operative living spaces;
- (k) laundromat and dry cleaners;
- (l) theatres, bowling alleys, pool and billiard halls, places of amusement, and private clubs;
- (m) recreational uses, including fitness centres/clubs;



- (n) commercial schools;
- (o) day care centres;
- (p) personal service shops;
- (q) accessory buildings, subject to the provisions of Section 23C.4(m).

**23C.3 Definitions** – The following definitions shall apply to lands, buildings or structures in the C4 Zone:

- (a) **Amenity Area** means the area situated within the boundaries of any residential development site intended for recreational purposes, and may include landscaped open space, patios, private amenity areas, balconies, communal lounges, swimming pools, children’s play areas, and similar uses, but does not include any area occupied at grade by a building’s service areas, parking areas, parking aisles, or driveways.
- (b) **Balcony** means an unenclosed or partially enclosed platform that is attached to and only directly accessible from within a building. A balcony includes associated guards, fencing, walls, screening and other associated features.
- (c) **Building Frontage** means the building façade that fronts on a street line where access to the building is available.
- (d) **First Storey** means the storey with its floor level closest to finished grade and shall exclude any floor of a building that has a floor level located below finished grade.
- (e) **Lot Line** means a line delineating any legal boundary of a lot.
  - i. **Exterior Lot Line** means the lot line of a corner lot which abuts the street, other than a front lot line.
  - ii. **Front Lot Line** means, in the case of an interior lot, the lot line dividing the lot from the street. In the case of a corner lot, the lot line abutting Princess Street shall be deemed the front lot line and the lot line abutting the other street shall be deemed an exterior lot line. In the case of a corner lot that does not abut Princess Street, the shorter lot line shall be deemed the front lot line. In the case of a corner lot which is also a through lot, the front lot line shall be the lot line abutting Princess Street.

- iii. **Interior Lot Line** means a lot line, other than a rear lot line that does not abut a street and is generally perpendicular to the front lot line.
  - iv. **Rear Lot Line** means the lot line(s) that is generally opposite to, and most distant from, the front lot line. In the case of a lot with frontage on Princess Street, all lot lines that separate the lot from a zone outside of the C4 zone or another commercial zone shall be considered a rear lot line.
- (f) **Podium** means the base component of any building that is greater than 20 metres in height (excluding mechanical penthouses) and shall only include the first through sixth storeys of such a building.
- (g) **Setback** means the horizontal distance from the lot line to the nearest part of any building or structure on a lot.
- i. **Exterior Setback** means the setback between the exterior lot line and the nearest part of any building or structure on the lot required by this By-Law.
  - ii. **Front Setback** means the setback between the front lot line and the nearest part of any building or structure on the lot required by this By-Law. Where a corner lot includes a front lot line and exterior lot line that do not intersect at one point, the front setback shall be determined by measuring the hypothetical point of intersection of the extension of the front lot line and the extension of the exterior lot line.
  - iii. **Interior Setback** means the setback between the interior lot line and the nearest part of any building or structure on the lot required by this By-Law.
  - iv. **Rear Setback** means the setback between the rear lot line and the nearest part of any building or structure on the lot required by this By-Law.
- (h) **Stepback** means the horizontal distance from the exterior wall of a specified storey to the exterior wall of the storey immediately below it. The horizontal distance shall be measured in the direction that is opposite to the lot line, ensuring that the stepback moves towards the centre of the lot.
- (i) **Storey** means that portion of a building between the top of any floor and the top of the floor next above it, or between the top of the floor and the ceiling above the floor, if there is no floor above it. Mechanical

penthouses, green roofs, rooftop amenity areas and other similar rooftop elements shall not be considered a storey.

- (j) **Streetwall** means the nearest wall or nearest portion of a wall of a building to a street line.
- (k) **Streetwall Height** means the vertical distance between the top of the streetwall and the finished grade immediately adjacent to the streetwall.
- (l) **Tower** means any portion of any building that is greater than 20 metres in height (excluding mechanical penthouses), excluding a podium, below grade parking structures and a mechanical penthouse.

**23C.4 Regulations** – The following regulations shall apply to lands, buildings, or structures in the C4 Zone:

- (a) Height:
  - i. All buildings / structures shall have a maximum height of the lesser of 20 metres or 6 storeys, except where shown on Schedule “O”, where the maximum height shall be the lesser of 61.5 metres or 20 storeys.
  - ii. The minimum streetwall height for all buildings / structures shall be 10.5 metres.
  - iii. A minimum of 75 percent of a wall of the building which faces a street line shall be built to the required front setback for the height of the streetwall.
  - iv. Notwithstanding Section 5.14, the height of mechanical penthouses and other rooftop equipment and elements shall be permitted in accordance with the provisions of Sections 23C.4(g) and 23C.4(h).
  - v. Where a lot or building is located within two different height areas shown on Schedule “O”, each portion of such lot or building shall comply with the height restrictions applicable to such portion of the lot or building.
- (b) Setbacks and Stepbacks:
  - i. Setbacks and stepbacks are required in accordance with the following table:

<b>Setbacks and Stepbacks</b>	<b>Minimum</b>	<b>Maximum</b>
Front setback and exterior setback	3.0 metres	5.0 metres

(along Princess Street, Division Street, Concession Street or Bath Road) – first storey		
Front setback and exterior setback (along Princess Street, Division Street, Concession Street or Bath Road) – second, third and fourth storeys	2.0 metres	5.0 metres
Stepbacks where the building faces Princess Street, Division Street, Concession Street or Bath Road – fifth and six storeys	2.0 metres from the exterior wall of the fourth storey	Not applicable
Front setback and exterior setback (along all other streets) – first through fourth storeys	2.0 metres	5.0 metres
Stepbacks where the building faces all other streets – fifth and sixth storeys	2.0 metres from the exterior wall of the fourth storey	Not applicable
Interior setback (for a property fronting on Princess Street)	0.0 metres	Not applicable
Interior setback (for a property not fronting on Princess Street)	1.2 metres	Not applicable
Rear setback	8.0 metres	Not applicable

- (d) Maximum Lot Coverage: 70%
- (e) Projections into Required Setbacks:
  - i. The following regulations apply to balconies that project out from the face of a building/structure:
    1. Balconies are permitted above the fourth storey of a building façade that is facing a street line, to a maximum depth of 1.5 metres.
    2. Balconies are permitted above the second storey of a building façade adjacent to a lot line that is not a street line, to a maximum depth of 2.0 metres.
- (f) Ground Floor Conditions:
  - i. Buildings fronting on Princess Street are required to have ground floor commercial uses on the first storey where any portion of the lot aligns with the area identified as “Required Ground Floor

Commercial Along Princess Street Frontage” on Schedule “O” to this By-Law.

- ii. Where ground floor commercial uses are required, the entire street frontage of the first storey, excluding areas devoted to a lobby or other shared entrances/exits for other permitted uses, shall be occupied by commercial uses. Portions of the floor area of the first storey that do not have frontage on a public street may be occupied by uses that service the building such as loading spaces, waste management facilities and rooms, mechanical rooms, bicycle parking facilities and other similar uses.
  - iii. The first storey of a building / structure shall have a minimum floor to floor height of 4.5 metres.
  - iv. The height of the first storey of a building / structure shall be measured from finished grade to the level of the floor immediately above it.
- (g) Mechanical Penthouses and Other Rooftop Mechanical Equipment:
- i. Notwithstanding Section 5.14, mechanical penthouses shall be permitted to exceed the maximum allowable building height by up to 3.5 metres.
  - ii. Mechanical penthouses shall not exceed 10 percent of the roof area on which they are located.
  - iii. Mechanical penthouses and other rooftop equipment shall be setback from the edge of the roof line a minimum distance equal to the height of the mechanical penthouse or other piece of rooftop mechanical equipment.
  - iv. Notwithstanding 23C.4(g)iii., enclosures dedicated only to stairs that are located at the end of a building shall be permitted within the required setback from the edge of a roof line.
- (h) Green Roofs and Other Rooftop Elements:
- i. Architectural appurtenances to support green roofs, other rooftop sustainability elements, or rooftop amenity spaces shall be permitted to exceed the maximum allowable building height by up to 3.5 metres.
- (i) Tower Conditions:

- i. Maximum Tower Floor Plate: Where a tower is permitted by Schedule “O” of this by-law, the maximum floor plate of the tower shall be 790 square metres. Tower floor plate shall include all areas enclosed within exterior walls, including hallways, elevators, stairs, mechanical shafts, etc.
  - ii. Tower separation: Where a tower is permitted by Schedule “O” of this by-law, it shall be separated from any other tower by a minimum distance of 25 metres and shall be located no closer than 12.5 metres from an adjacent property.
  - iii. Stepback: Where a tower is permitted by Schedule “O” of this by-law, it shall be setback from the podium by a minimum distance of 2.0 metres.
  - iv. Notwithstanding 23C.4(h)(ii), where an adjacent property has already been developed with a tower, the tower is permitted to be located closer than 12.5 metres to the lot line shared with that adjacent property so long as the 25 metre tower separation distance is maintained.
- (j) Parking Spaces
- i. Parking provisions shall be as set out in Section 5.3 of this Zoning By-Law, with the exception of the following provisions:
    - 1. Parking spaces shall not be permitted in a yard abutting a street line.
    - 2. Minimum number of residential parking spaces: 0.4 per dwelling unit.
    - 3. Maximum number of residential parking spaces: 1.0 per dwelling unit.
  - ii. Section 23C.4(j)(i)(1) shall not be construed to prohibit a reduction in the minimum number of parking spaces required if such reduction is authorized through a minor variance or rezoning in accordance with the Planning Act.
- (k) Maximum Residential Density

- i. The maximum residential density shall be 210 dwelling units per net hectare, except where a tower is permitted by 23C.4(2)(i), the maximum residential density of the tower and its podium shall be 480 dwelling units per net hectare.

(l) Loading Spaces

- i. Loading space provisions shall be as set out in Section 5.4 of this Zoning By-Law, with the exception of the following provisions:
  1. Loading spaces shall not be permitted in a yard abutting a street line.
  2. A minimum number of loading spaces shall be provided in accordance with the following table:

<b>Land Use</b>	<b>Commercial Gross Floor Area / Residential Dwelling Units</b>	<b>Number of Required Loading Spaces</b>
Commercial Uses	0-300 square metres	0
	Greater than 300 square metres to 2,500 square metres	1
	Greater than 2,500 square metres to 7,500 square metres	2
	Greater than 7,500 square metres	2 plus 1 for each additional 9,300 square metres beyond 7,500 square metres
Residential Uses	0-50 dwelling units	0
	51-399 dwelling units	1
	Greater than 400 dwelling units	2

(m) Amenity Area:

- i. The amenity area provisions of Section 5.27 of this by-law apply.
- ii. Notwithstanding Section 5.27(a), a minimum of 10 square metres of amenity area shall be provided for each dwelling unit on a lot.

(n) Accessory Buildings:

- i. Maximum Height: 4.6 metres



- ii. Maximum Lot Coverage: 10% of lot area
- iii. Location: Detached accessory buildings shall be located:
  - 1. In an interior side yard or rear yard;
  - 2. A minimum of 1.2 metres from a lot line;
  - 3. Not closer to the street than the front of the main building;  
and,
  - 4. Not closer to the street than the side of the main building on  
a corner lot.
- (o) Transition Clause:
  - i. Nothing in this By-Law shall prevent the development or use of a lot or one or more buildings or structures for which a complete application for a building permit was received by the City on or before (date of passing of this By-Law), if the development or use complies, or the building permit application is amended to comply, with the applicable former provisions of Zoning By-Law Number 8499 as it was read immediately prior to the passing of this By-Law.
  - ii. Where a complete application was received by the City on or before the date of passing of this By-Law for the development or use of a lot or one or more buildings or structures, approval may be granted, if deemed appropriate, in the context of the applicable former provisions of Zoning By-Law Number 8499 as it was read immediately prior to the passing of this By-Law, for one or more of the following applications:
    - 1. minor variances pursuant to Section 45 of the Planning Act;
    - 2. site plan control approval pursuant to Section 41 of the Planning Act;
    - 3. consent pursuant to Section 53 of the Planning Act;
    - 4. draft plan of subdivision approval or draft plan of condominium approval pursuant to Section 51 of the Planning Act;
    - 5. payment in lieu of parking agreement pursuant to Section 40 of the Planning Act; and

6. a part lot control exemption approval pursuant to Section 50 of the Planning Act.
- iii. Where the development or use of a lot or one or more buildings or structures qualifies under Section 23C.4(o)ii., a building permit may be issued after final approval is received for all required applications and if the development or use complies, or the building permit application for the development or use is amended to comply, with the provisions of the applicable former general zoning by-law as it was read immediately prior to the passing of this By-Law.
- iv. Nothing in this By-Law applies so as to continue the exemption provided by Section 23C.4(o) beyond the issuance of the final building permit upon which the exemptions are founded.
- v. Section 23C.4(o) shall be repealed in its entirety three years after the date of passing of this By-Law.

**23C.5 Holding Symbol:**

- (a) Purpose and Requirement for Removal of Holding Symbol:
  - i. The use and removal of the “-H” Holding Symbol shall be in accordance with the provisions of Section 5.39.
  - ii. Redevelopment of lands shall not proceed until the City is satisfied that there is adequate servicing capacity (i.e. water, wastewater, natural gas, and electrical) for the proposed development.
- (b) Permitted Interim Uses:
  - i. In accordance with Section 23C.2, provided the use occurs within the walls of a building / structure that existed on the date of the passage of this by-law.

**23C.6 Temporary Use:**

(T1) Williamsville Main Street

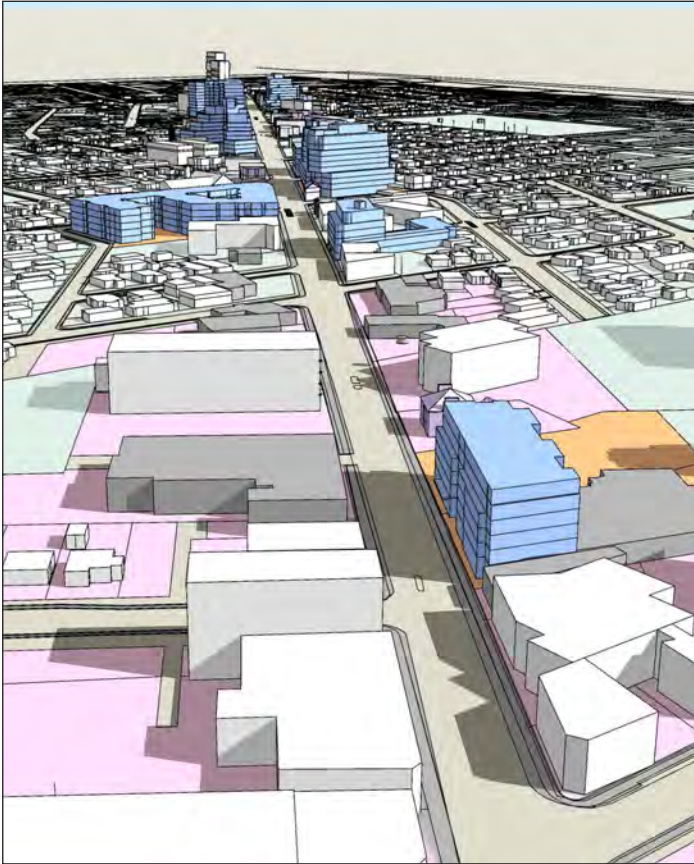
Expires: December 18, 2021 of By-Law Number 2019-6

The lands to which By-Law Number 2019-6 applies may be used for the following uses, in addition to those uses permitted in Section 23C.2:

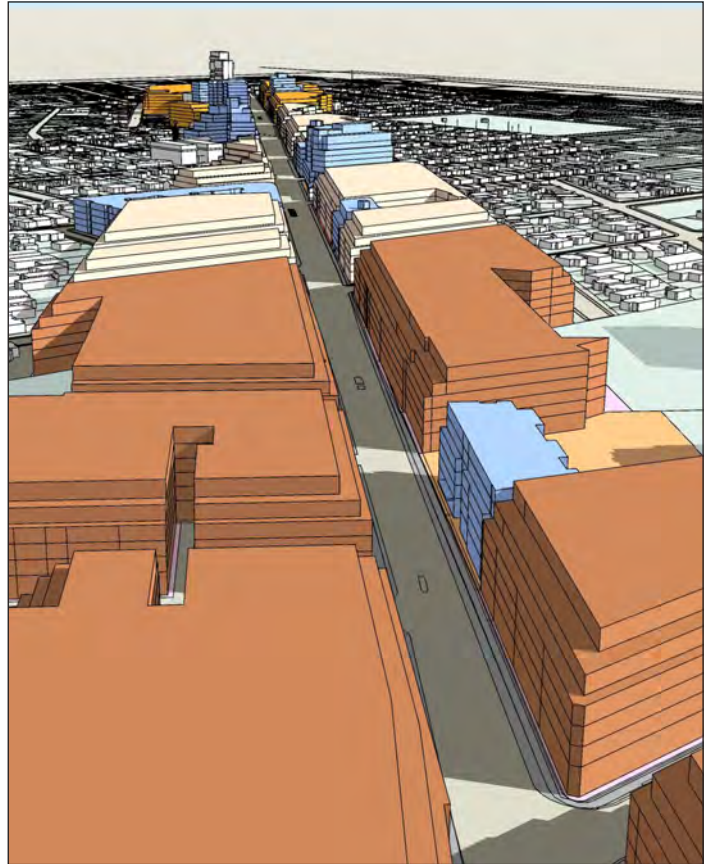
- (a) Permitted Uses

- i. Surface parking lot

A1 - Princess and Regent Looking East - Bird's eye



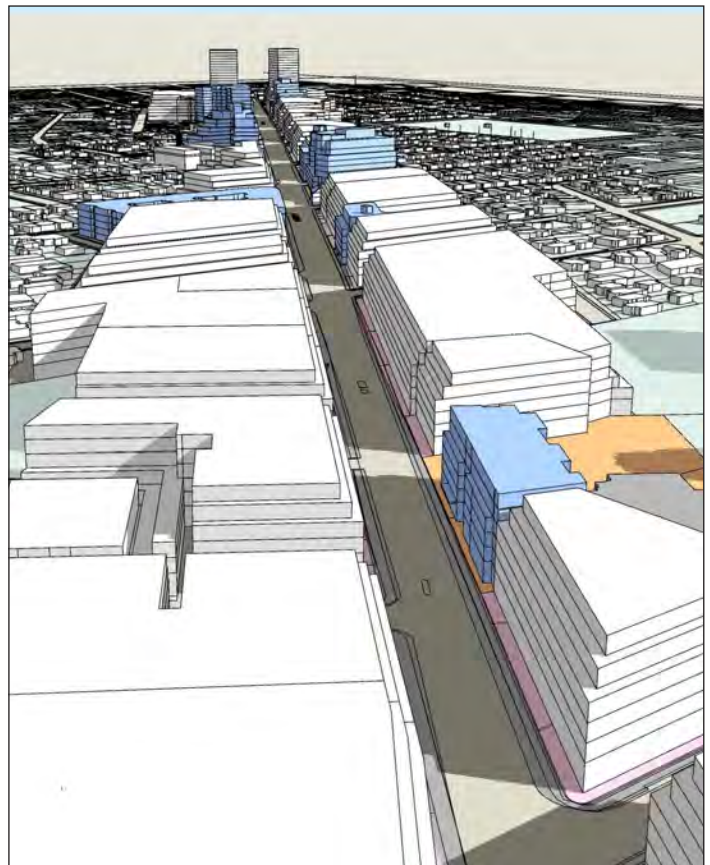
Existing and pending buildings



Current zoning



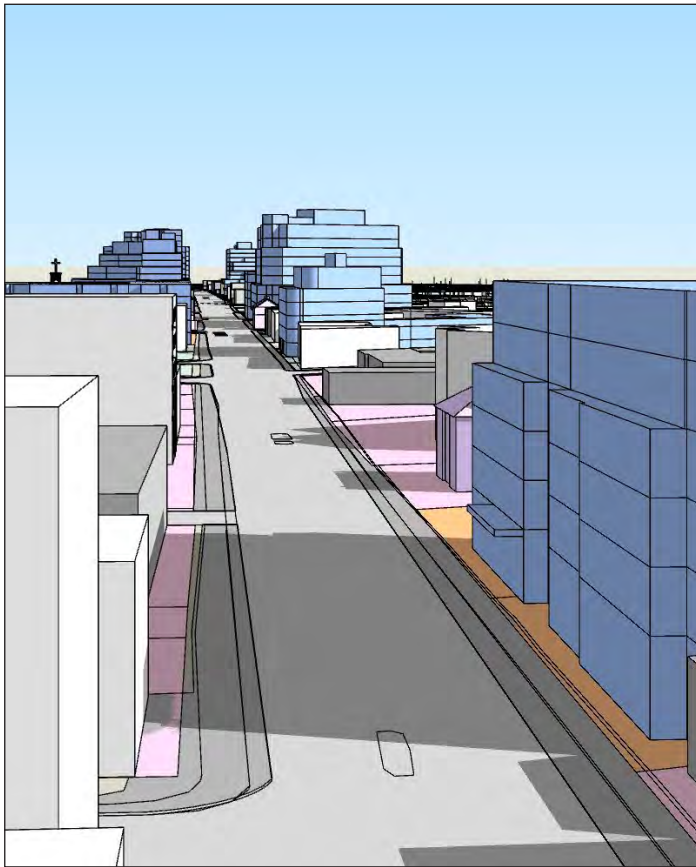
Photo



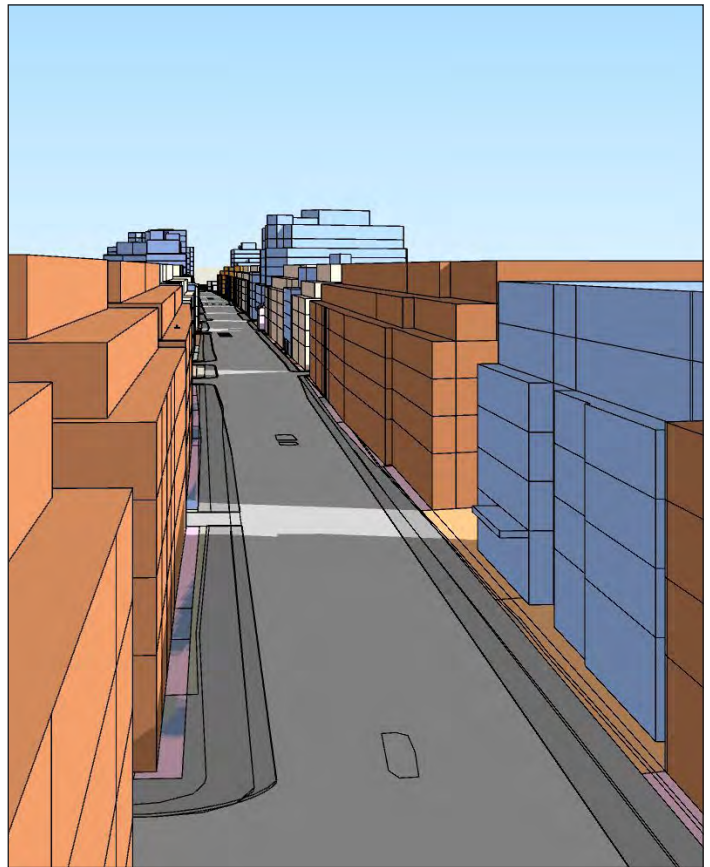
Demonstration of proposed changes



A2- Princess and Regent looking East - Podium



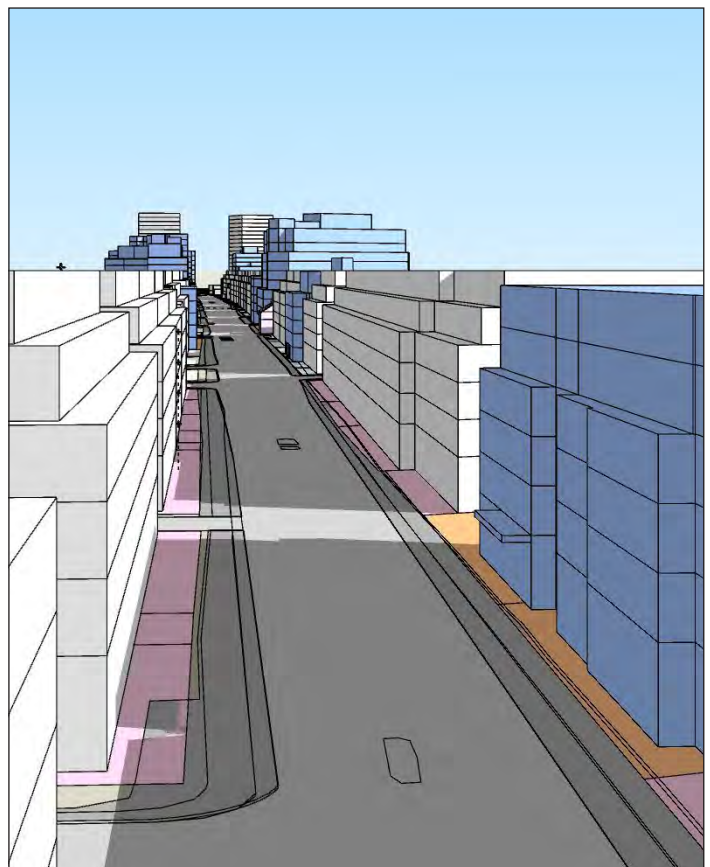
Existing and pending buildings



Current zoning

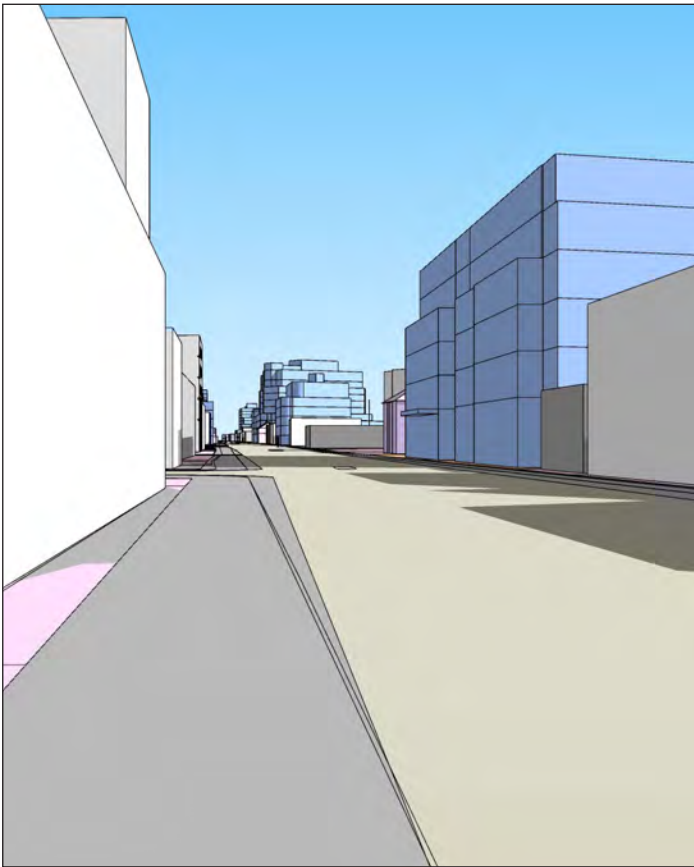


Photo

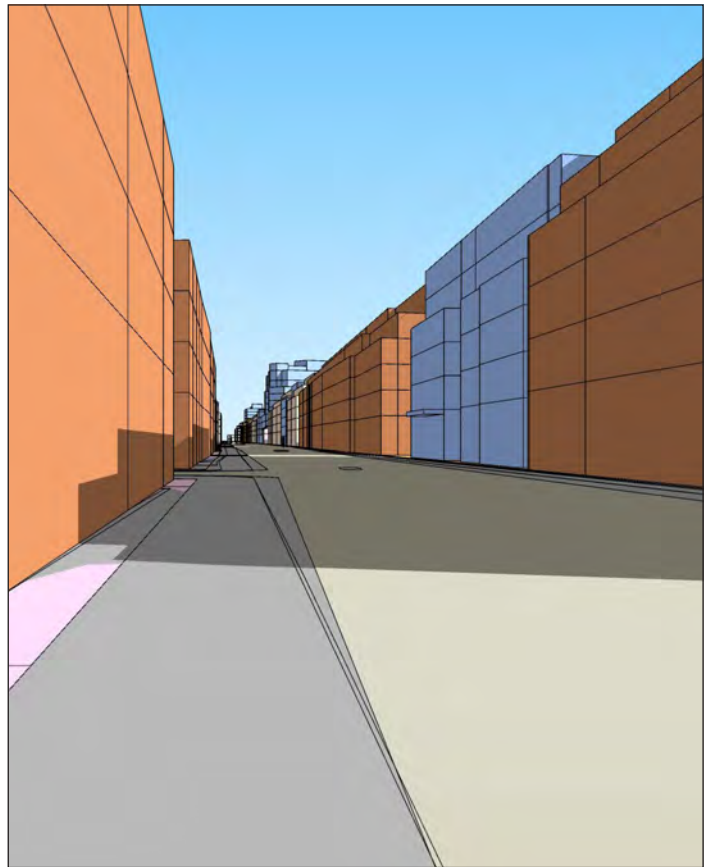


Demonstration of proposed changes

A3 - Princess and Regent looking East - Street-level



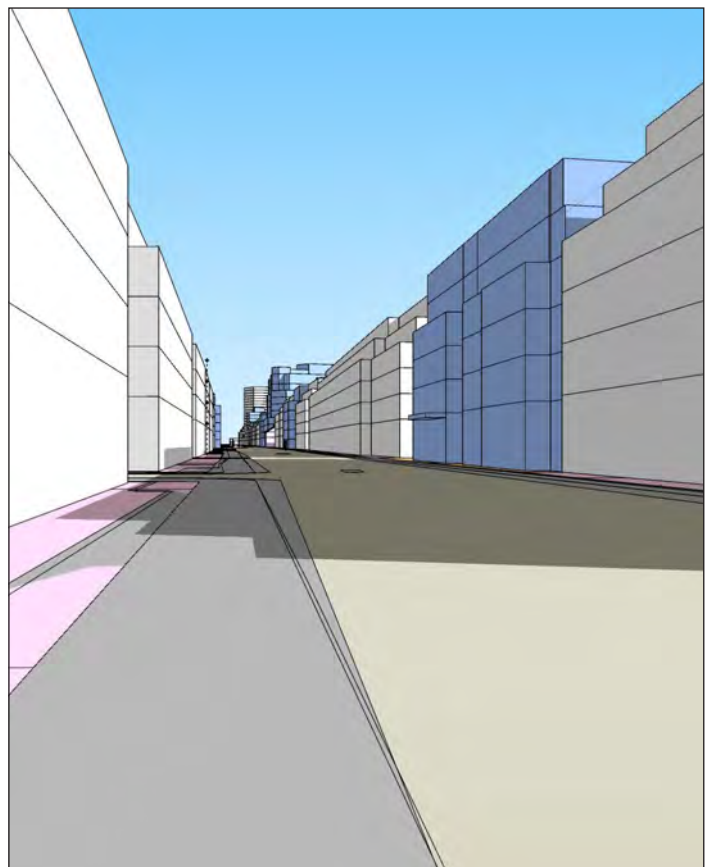
Existing and pending buildings



Current zoning



Photo



Demonstration of proposed changes



B1 - Princess and MacDonnell looking East - Bird's eye



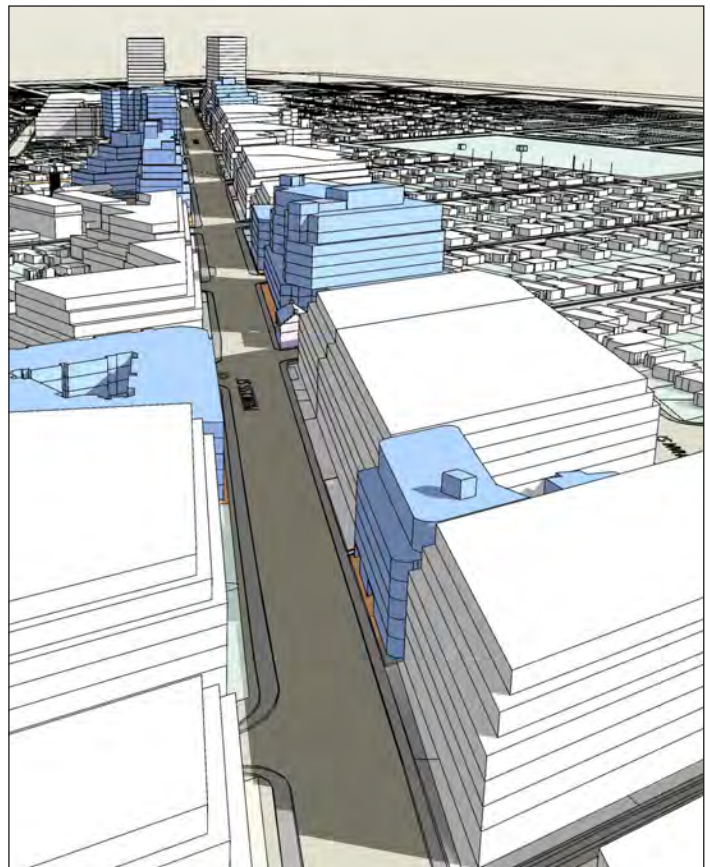
Existing and pending buildings



Current zoning



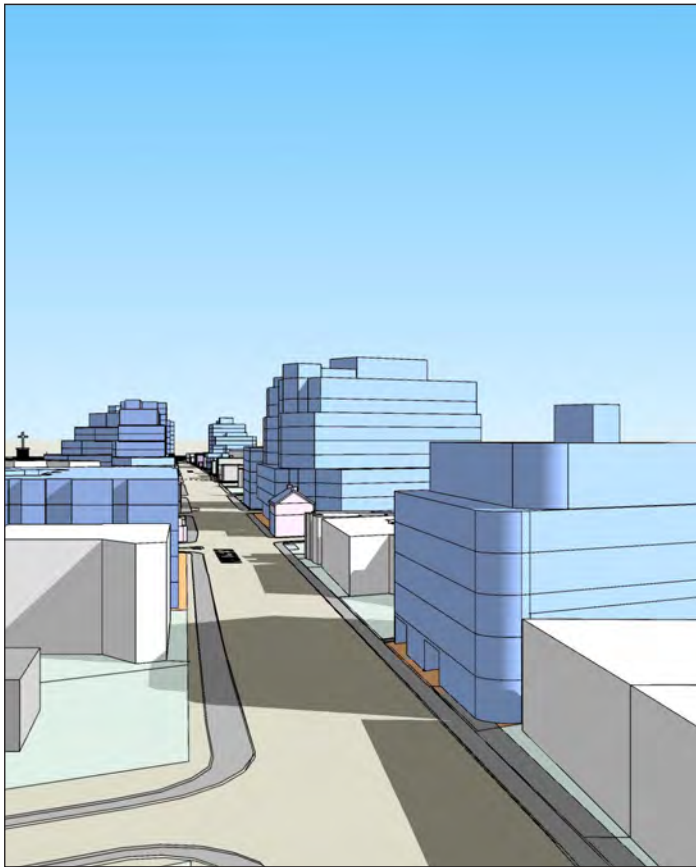
Photo



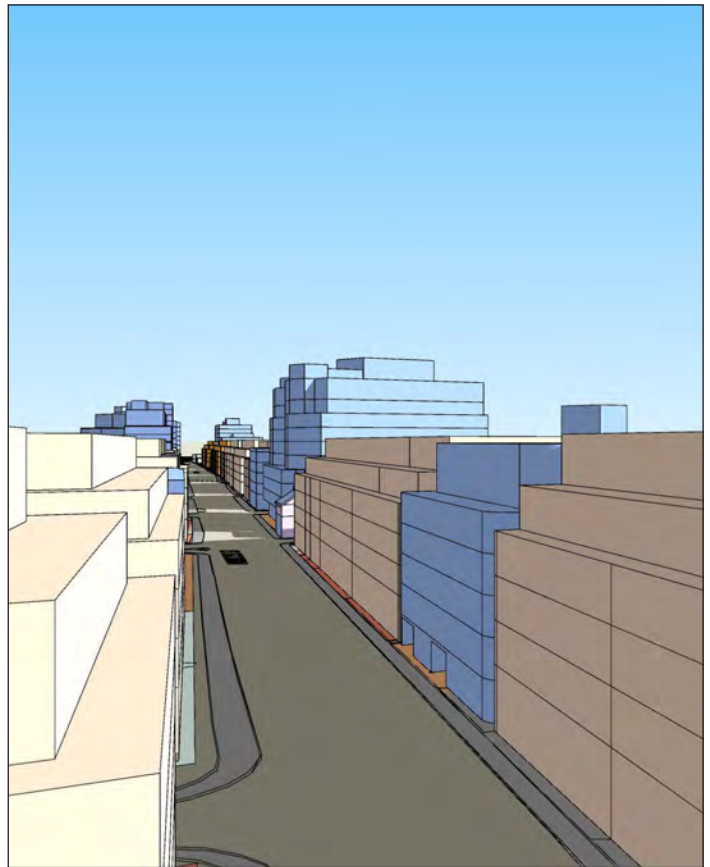
Demonstration of proposed changes



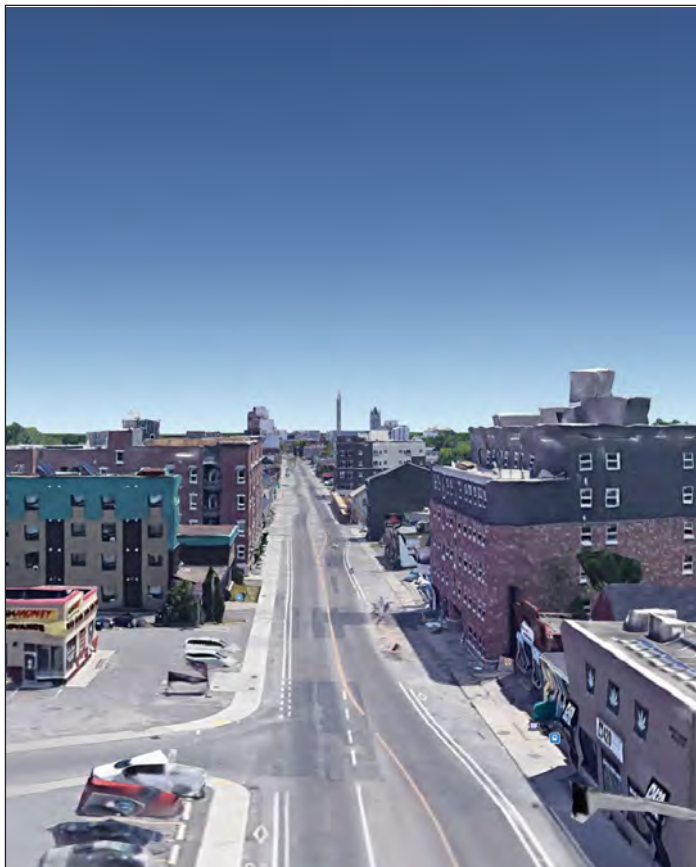
B2 - Princess and MacDonnell looking East - Podium



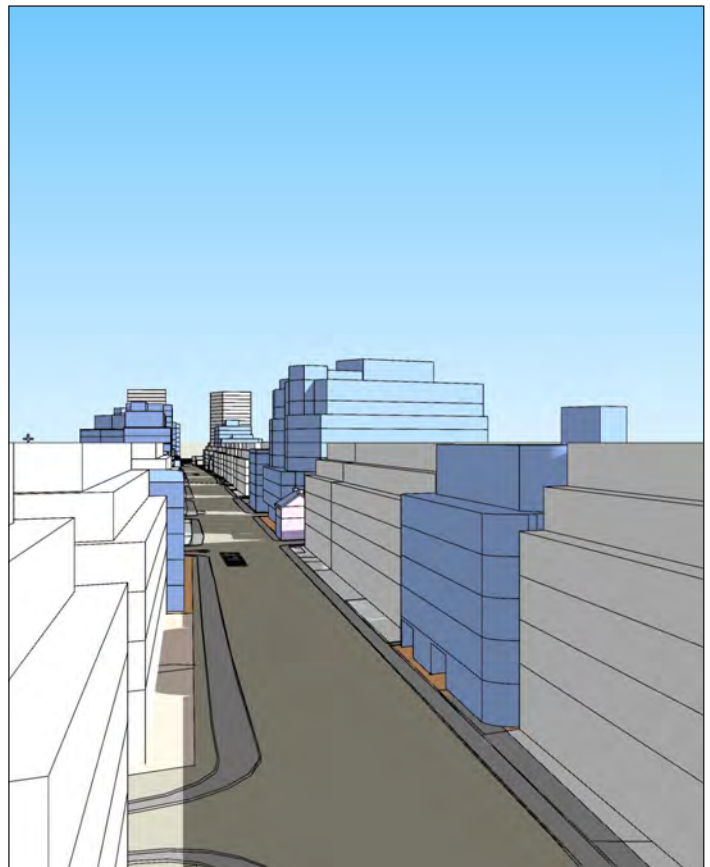
Existing and pending buildings



Current zoning

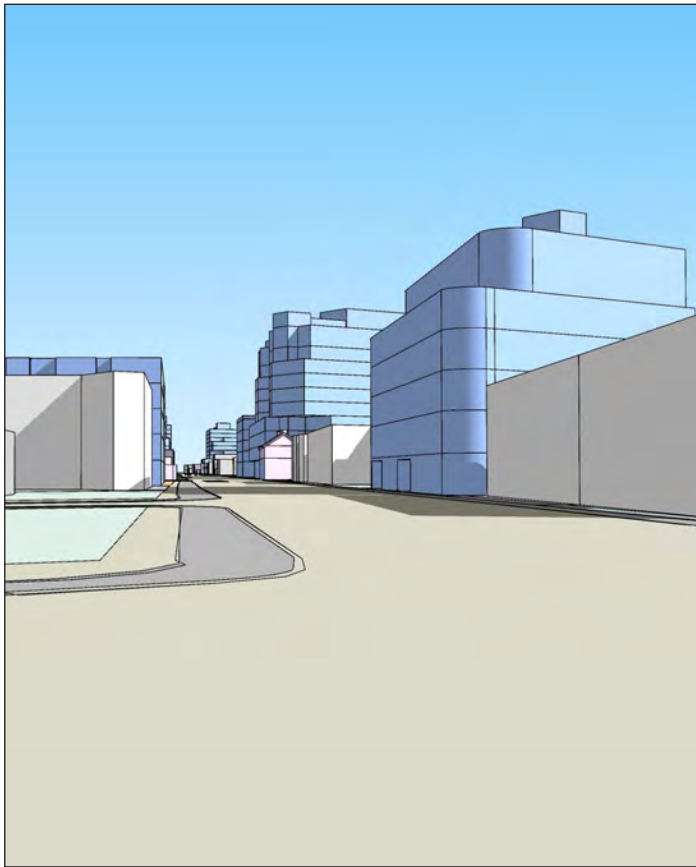


Photo

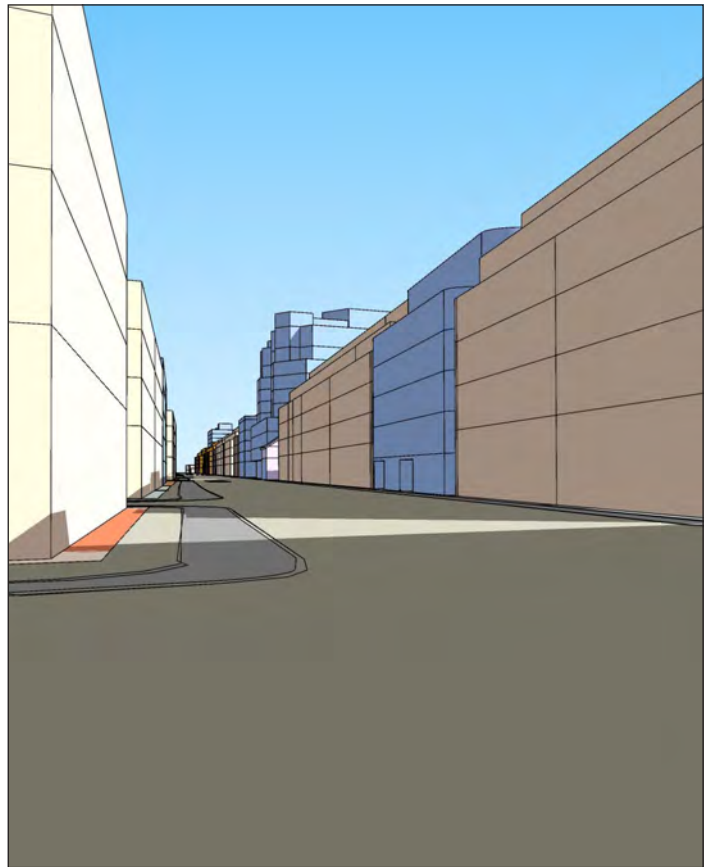


Demonstration of proposed changes

B3 - Princess and MacDonnell looking East - Street Level



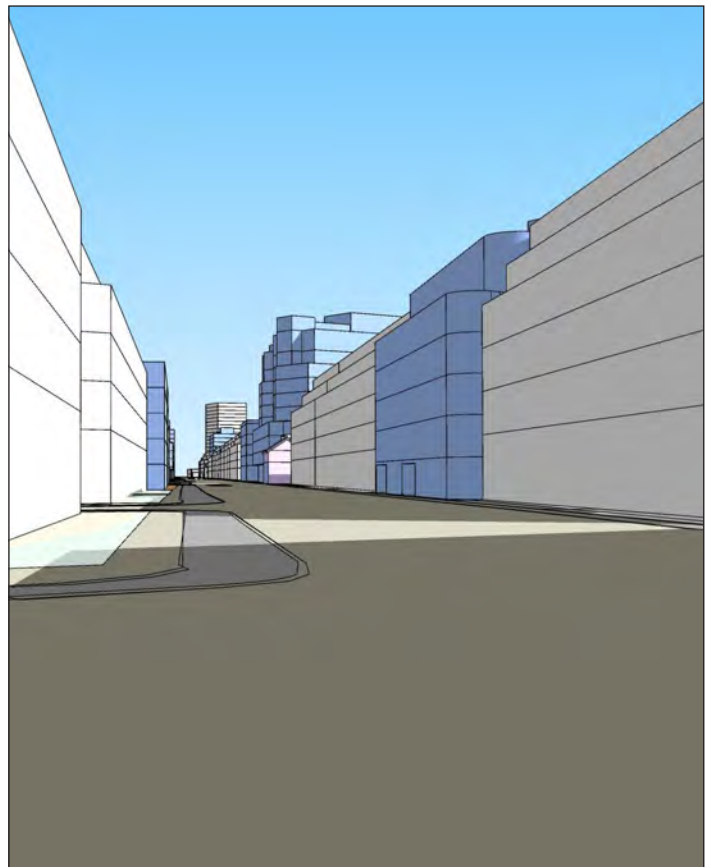
Existing and pending buildings



Current zoning



Photo



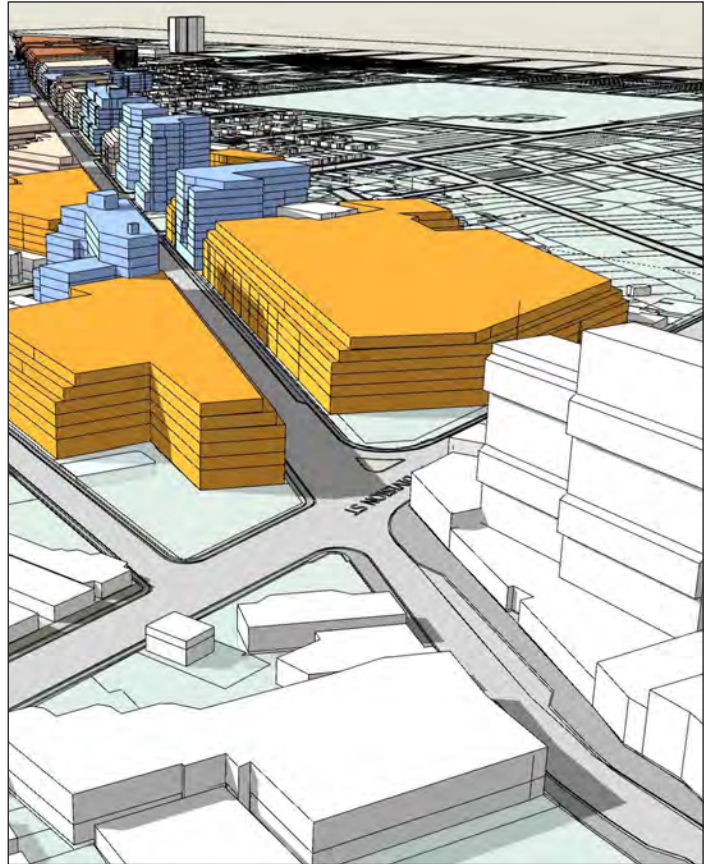
Demonstration of proposed changes



C1 - Princess and Division looking West - Bird's eye



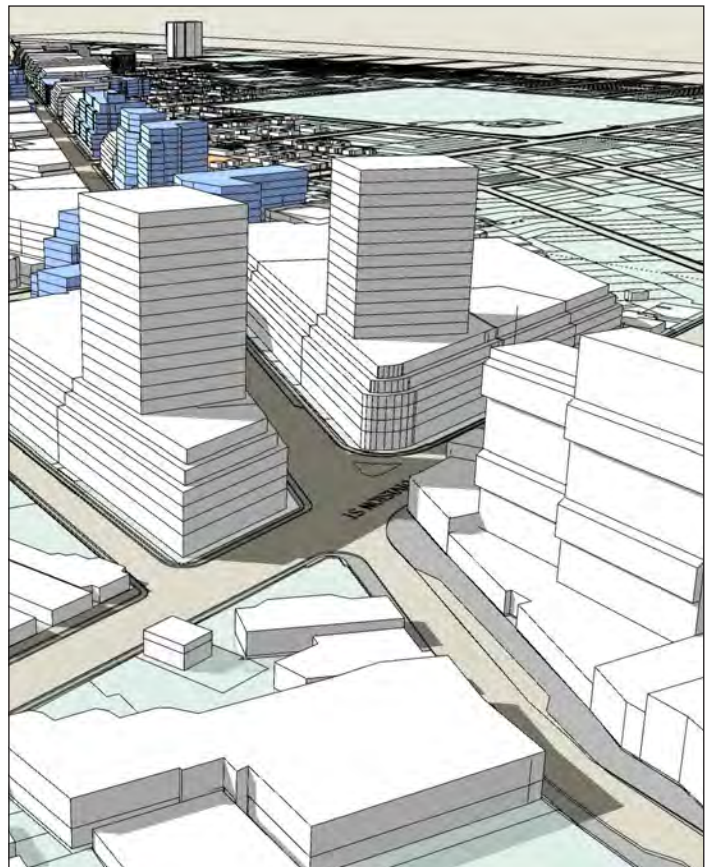
Existing and pending buildings



Current zoning



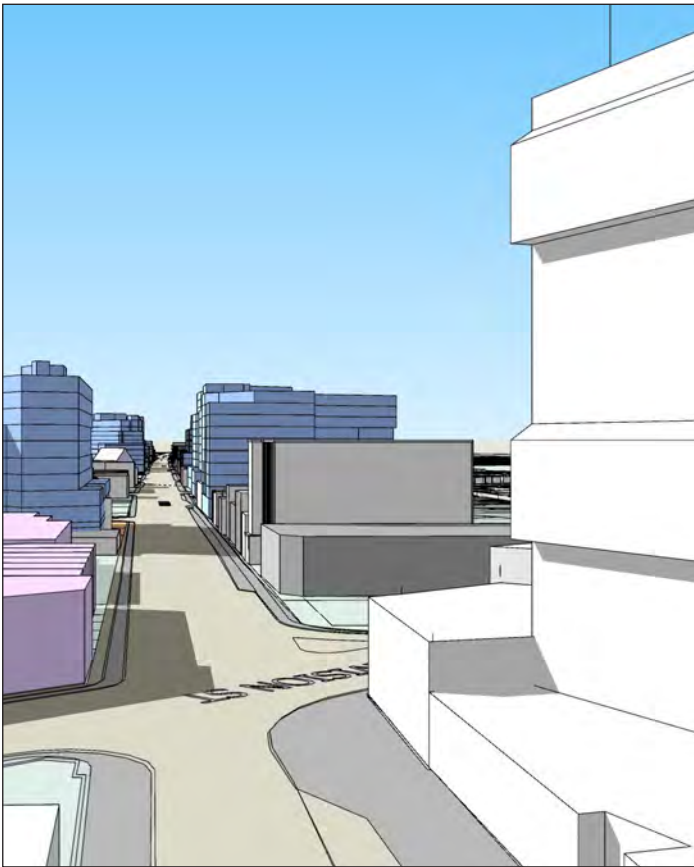
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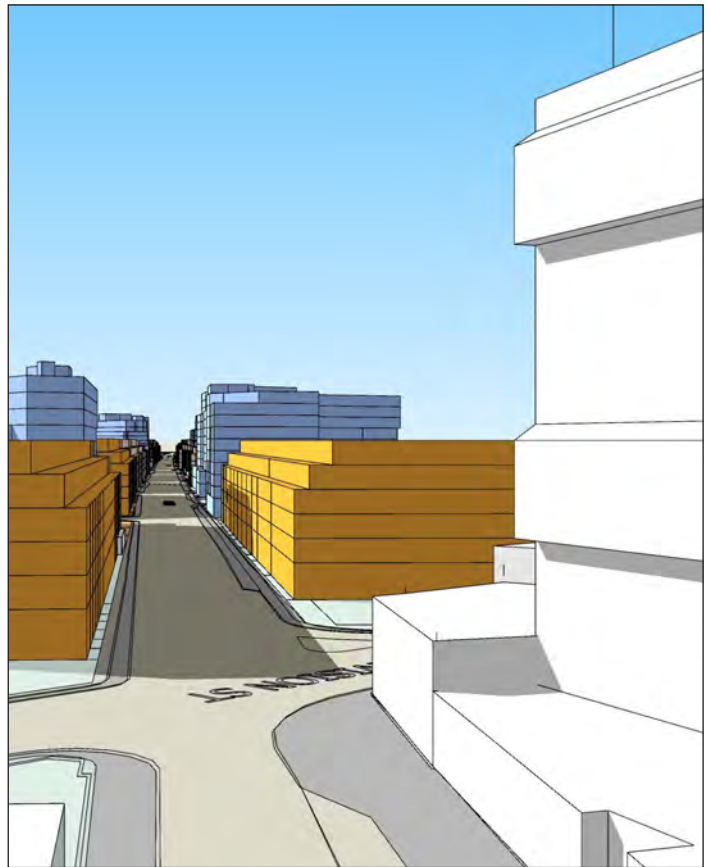
Demonstration of proposed changes



C2 - Princess and Division looking West - Podium



Existing and pending buildings



Current zoning



Photo



Demonstration of proposed changes

C3 - Princess and Division looking West - Street level



Existing and pending buildings



Current zoning



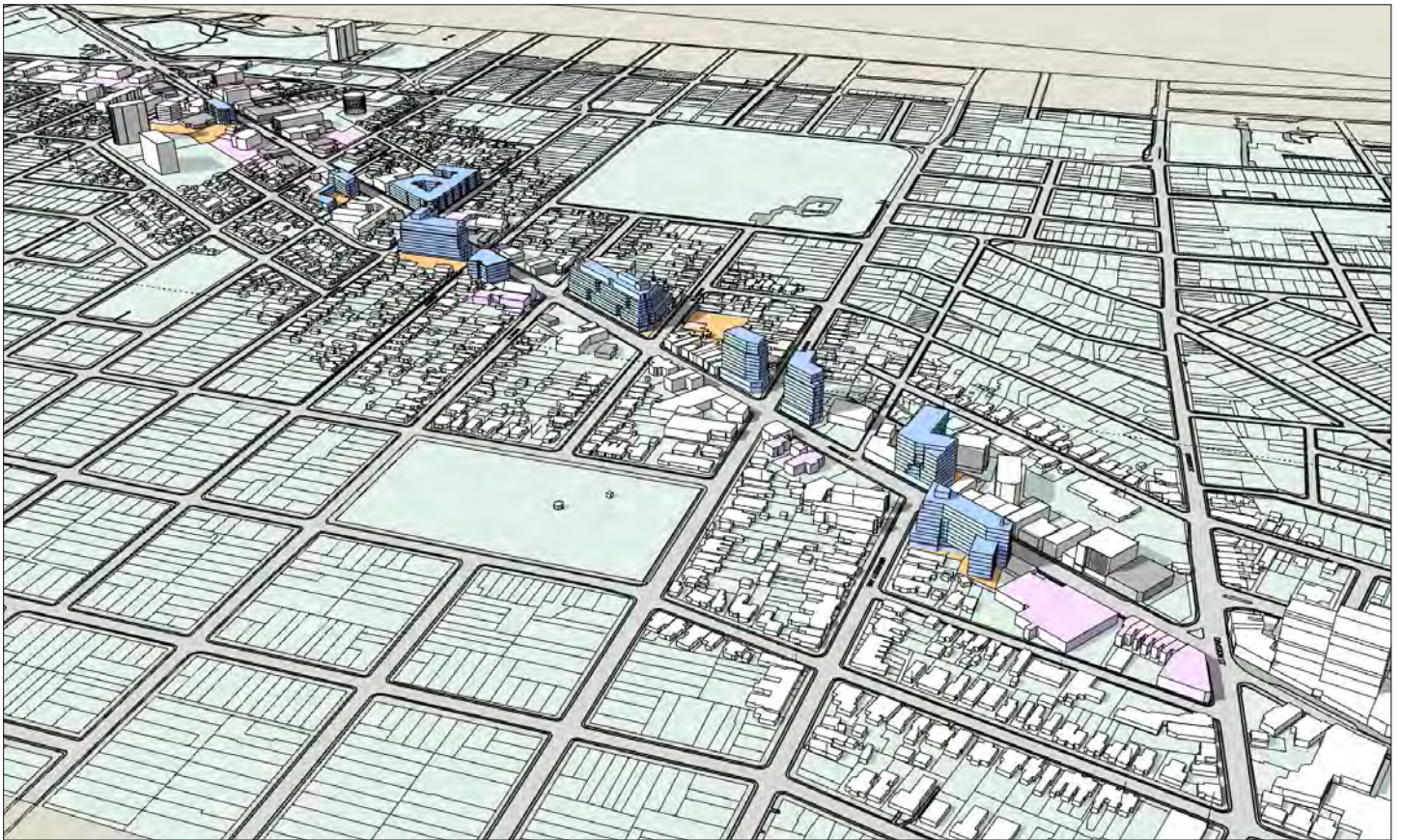
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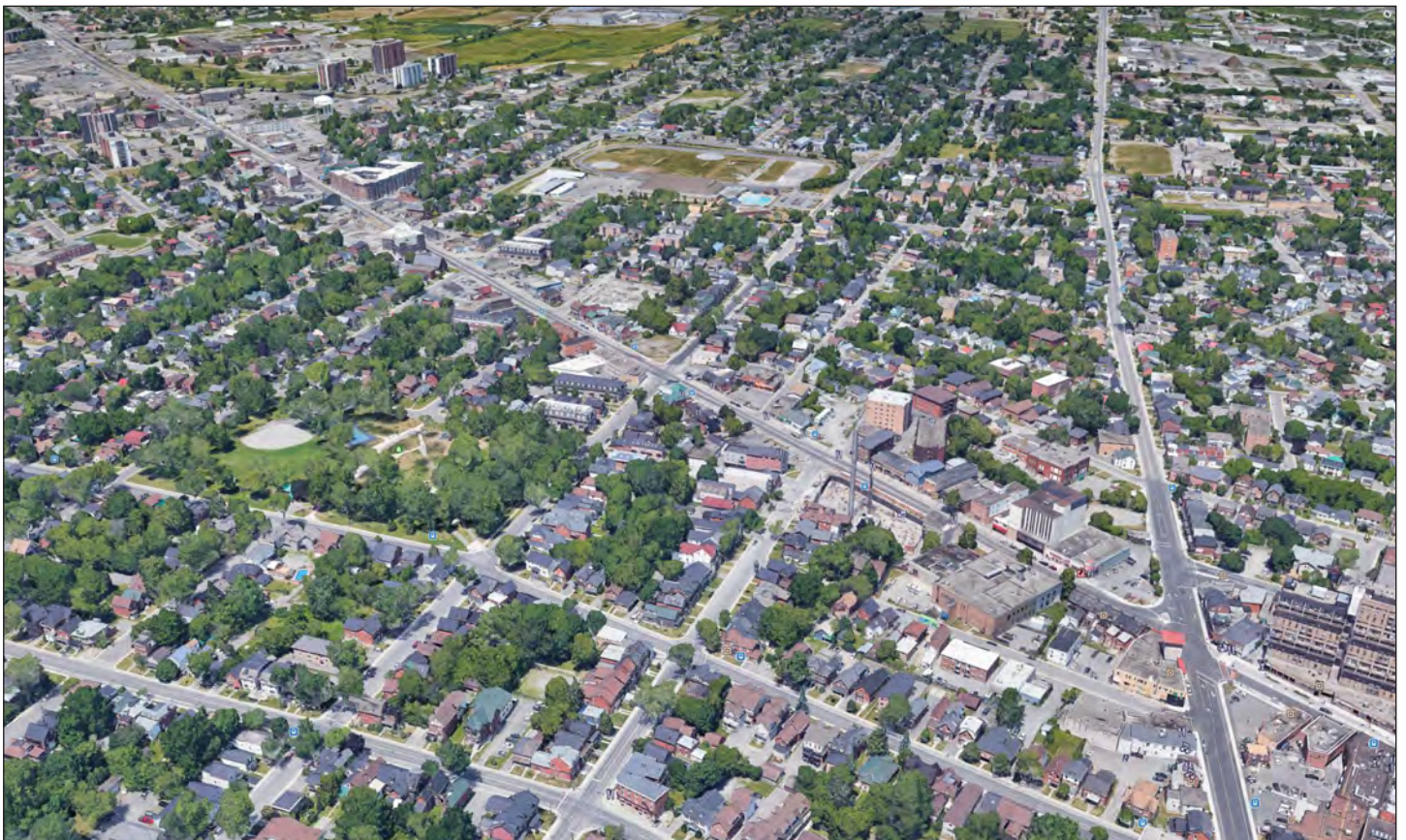
Demonstration of proposed changes



Full Corridor - Williamsville looking northwest



Existing conditions



Corridor photo



Full Corridor - Williamsville looking northwest



Current zoning



Demonstration of proposed changes



## **Williamsville Main Street Study Update Workshop – February 12, 2020, 6:30-8:30 p.m., St. Luke’s Church**

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### **Summary of Feedback**

#### **Question 1: What do you think about the permissions for 3-4 storeys at the street with a maximum of 6 storeys total?**

In general, participants were in agreement that a general building height of 3-4 storeys along the corridor is acceptable, with a maximum of 6 storeys total. In addition, there was significant concern for the setbacks required for these buildings. There was generally interest in widening the setbacks to allow for wider sidewalks.

#### **Question 2: What do you think about the permissions for up to 10 storeys?**

Most participants feel that 10 storey buildings are not considered to be acceptable along this corridor. Despite the strong no, there were a few comments that suggested that selective locations that were not ‘side by side’ may be acceptable. One group expressed that they did not want 10 storey buildings, but if they were to be built, that a larger setback would be required in order to deal with the streetscape (including solar, accessibility ,etc.).

#### **Question 3: Are there areas remaining that make sense for additional height and density? Where are they, and what height and/or number of units do you think makes sense?**

All groups that responded to this question included the property at the north-east corner of Princess and Division Streets (currently Shoppers Drug Mart at 429 Princess Street) as an acceptable location for a 10 storey building, due to its centrality and distance from single family dwellings. The one other location that was suggested by multiple groups is the far western end of Williamsville corridor. These were the only two areas within the corridor identified. Only one of the groups contemplated a building height of taller than 10 storeys; this group suggested a 25 storey building on the current Shoppers Drug Mart property.

#### **Question 4: What improvements would support your use of the corridor? Specifically as they relate to active transportation in the corridor?**

This question received a significant amount of attention from participants. Suggested improvements include: adjusting building heights; increasing setbacks; increasing sidewalk widths; eliminating street parking; creating separation/safety for bike lanes; clearing snowbanks so that buses can access stops; using shuttles to the university; requiring at grade parking (25% uncovered); having fewer cars downtown (affordable

## **WMSS Update – Workshop Summary (February 12, 2020)**

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parking near transit), including accessible parking; introducing 4 metre sidewalks; and, creating seasonal bike lanes. The financial cost of these suggestions was expressed as an additional consideration.

### **Question 5: Based on what can be considered in zoning by-laws, what is important for the pedestrian experience at ground level?**

Important considerations for the pedestrian experience at the ground level include: wider setbacks; wider sidewalks; trees; parks; street furniture; mimicking the streetscape of lower Princess Street; room for patios (bump outs); flower beds; bike racks; redesign areas for deliveries (to stop deliveries from blocking sidewalks and bike paths); consideration of sight triangles for pedestrians; variation in use/height/density; angular plane; not limiting beneficial design with regulation; limiting lot consolidation; stepbacks for green space and shadowing; ensuring sun reaches the ground; mixed uses; grocery stores; green infrastructure; lighting (natural and street lighting); accessibility of sidewalks; bus shelters; snow clearance for access to businesses; diversity in business options; creating child friendly public sphere; respect for rear setback requirements; appropriate transition zones between taller buildings and existing low density residential areas; walkability; air rights; public amenities; street life/vibrancy; and no rigid street wall – different building heights are good. Participants suggested that an architect be hired to review these issues.

## **Feedback from Table Groups**

### **Table 1**

1. What do you think about the permissions for 3-4 storeys at the street with a maximum of 6 storeys total?
  - Would like clarification on heights and setbacks
  - General agreement on 6 storey height
  - Purpose of development is to mirror the downtown
2. What do you think about the permissions for up to 10 storeys?
  - 10 storeys is too high – 6 stories is acceptable
  - Concrete construction
  - Corridor should be 6 storeys
  - Maximum 6 storey without exception
  - Addressing lot consolidation in the process
3. Are there areas remaining that make sense for additional height and density? Where are they, and what height and/or number of units do you think makes sense?
  - Concern that more developers will consolidate properties to increase height
  - 10 storeys at Princess and Division (doesn't encroach on neighbourhood)
  - Increased height and density at Princess + Division and at traffic circle end

## WMSS Update – Workshop Summary (February 12, 2020)

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4. What improvements would support your use of the corridor? Specifically as they relate to active transportation in the corridor?
  - Take into account width of side streets
    - o Adjust heights and setbacks accordingly
    - o Consider existing widths
5. Based on what can be considered in zoning by-laws, what is important for the pedestrian experience at ground level? (Building setbacks, the stepback of upper floors of a building, and how ground floor spaces integrate with the public realm)?
  - Safer bike lanes
  - Wider sidewalks
  - Trees/parks/street furniture
  - Parkettes
  - Enforcements of setbacks
  - Wider setback than 1 metre (room for a tree)
  - Mimic streetscape of lower Princess Street
  - Wider sidewalks to accommodate use/density/more pedestrians and residents
  - Trees; need trees
  - Intent is to:
    - o Have room for trees/patios/flower beds/bike racks
    - o Bump outs for patios
  - Parking is an issue for deliveries – people stop in bike lanes
  - Redesign of bikes lanes to accommodate deliveries (switch to other side. Two way cycling lanes)
  - Consider sight triangles for pedestrians
    - o Setbacks are important for sight lines
  - Important to have a variation in use/height/density of development within a block
    - o i.e. not all 10 storey within a block – mixed height and types (townhouses and smaller multi-unit buildings beside the 10 storeys)
  - enforce angular planes
    - o rear walls and side walls (side streets) should not be allowed to build to the lot line without angular planes and setbacks
  - we don't want to limit beneficial design with regulation
  - 630 Princess as example
    - o Does not have setbacks on side and back walls which affect neighbourhood privacy

### Table 2

1. What do you think about the permissions for 3-4 storeys at the street with a maximum of 6 storeys total?
  - Reasonable along corridor

## WMSS Update – Workshop Summary (February 12, 2020)

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- Relationship of height to setback
  - 3-4 storey not acceptable with minimum setback
  - People want to see some setback
  - Street furniture and trees not possible with minimal setback
  - Consider expansion for café etc., for more vibrant streetscape
  - Must have a setback of 2-3 metres
  - 6 storey max – stepback for 5+6 storey
  - 5 storey buildings in mid-February prevents passive solar.
    - o Climate emergency and sustainability
    - o Sunlight on the street
    - o Maintain angular plan
  - Agree, but what is the setback? 2-3 metres
2. What do you think about the permissions for up to 10 storeys?
- No – or with adequate setback to deal with solar etc.
3. Are there areas remaining that make sense for additional height and density? Where are they, and what height and/or number of units do you think makes sense?
- Where there is no low-rise single family residential
    - o i.e. at the traffic circle and at division northside. Both only up to 10 storeys.
    - o (at the two ends of the corridor)
4. What improvements would support your use of the corridor? Specifically as they relate to active transportation in the corridor?
5. Based on what can be considered in zoning by-laws, what is important for the pedestrian experience at ground level? (Building setbacks, the stepback of upper floors of a building, and how ground floor spaces integrate with the public realm)?
- Eliminate parking
  - Store fronts – businesses
  - Bike lanes separation
  - Limit lot consolidation/ consider where it can really go
  - All above is food for pedestrians, accessibility included already
  - Setbacks a must 2-3 metres
  - Stepback is a must for shadows and green
  - Princess Street is not very wide because of the existence of bike lanes
  - Passive solar taken seriously – ability of sunlight to reach the street
  - Mixed use
  - Greenspace
  - Green infrastructure
  - Grocery stores
  - Separation between bike lanes and cars

## WMSS Update – Workshop Summary (February 12, 2020)

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**Table 3**

1. What do you think about the permissions for 3-4 storeys at the street with a maximum of 6 storeys total?
  - Like 3-6 storeys but not happening
  - 3-6 with greater setback
  - Greater setbacks from residential properties in rear
  - More focus on rear low-density residential – setbacks and transitions
  - Human scale – how it feels
2. What do you think about the permissions for up to 10 storeys?
  - Selective locations for 10 storeys only. Not side by side.
  - No 10 storey on Princess Street
  - Pressure to give information –what “snap judgments”
  - Concerns with 10 storeys anywhere on Princess
3. Are there areas remaining that make sense for additional height and density? Where are they, and what height and/or number of units do you think makes sense?
  - Shoppers Drug Mart (Princess and Division) for 10 storeys
4. What improvements would support your use of the corridor? Specifically as they relate to active transportation in the corridor?
  - Snowbanks away so buses can access bus stops
  - Safe bike lanes, less room for cars
  - Shuttles to university
  - Art installations
  - Less concrete
  - At-grade bike parking (25% not covered)
  - Staging of vehicles during parking needs to be regulated
  - Street furniture, trees
  - Ground floor commercial
  - Retail year round
  - Integration
  - Need to consider the financial viability of all these things
5. Based on what can be considered in zoning by-laws, what is important for the pedestrian experience at ground level? (Building setbacks, the stepback of upper floors of a building, and how ground floor spaces integrate with the public realm)?
  - Lighting
  - Accessibility – not too cluttered – clear walking path
  - Bus shelters
  - Snow clearance for access to businesses
  - Diversity in business options
  - Insufficient space within right of way to accommodate these things – not sure what the distance is but needs to be sufficient

## WMSS Update – Workshop Summary (February 12, 2020)

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- Focus on child friendly public sphere
- Respect for rear setback
  - o Presently 3 metres. Should it be greater?
- Appropriate transition zone between taller buildings and existing lower density residential

### Table 4

1. What do you think about the permissions for 3-4 storeys at the street with a maximum of 6 storeys total?
  - Less risk for residential but not for office
  - Office space bonusing for tall buildings
    - o Close to transit nodes and close to campus
    - o It's just a suburb if there is no mix
  - 5 storeys tall – narrow sidewalk and wider setback
  - 3-4 storeys equals canyon effect
  - Keep the maximum at 6 storeys
2. What do you think about the permissions for up to 10 storeys?
  - Height is good only if there is more sun
  - 4 storey wall
  - Café space
  - Angular – Princess Towers (ugly)
  - Hire an architect on site
  - Minimum 4 metres
  - Sky access
  - Setbacks at upper floors = disastrous
    - o Cheap for developers
3. Are there areas remaining that make sense for additional height and density? Where are they, and what height and/or number of units do you think makes sense?
4. What improvements would support your use of the corridor? Specifically as they relate to active transportation in the corridor?
  - Winter has less active transit
  - Need parking off main street (parking garages)
  - Removal of street parking
  - Princess is dangerous for biking – narrow sidewalk
  - Less cars equals affordable parking near transit – accessible parking
  - 4m sidewalks
  - Separate bike lanes
  - There is a parkland deficiency
  - Montreal biking
  - Seasonal bike lanes

## **WMSS Update – Workshop Summary (February 12, 2020)**

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5. Based on what can be considered in zoning by-laws, what is important for the pedestrian experience at ground level? (Building setbacks, the stepback of upper floors of a building, and how ground floor spaces integrate with the public realm)?
- Walkability
  - Light flow
  - Air rights
  - Height as an issue
  - Wider setbacks from the streets are preferred
  - Walking environment
  - Public amenities
  - Wider sidewalks
  - Street life
  - No vibrancy
  - No rigid street wall; different heights are good

### **Group Feedback (Debrief)**

#### **Feedback from Question 1**

- Hire architect
- Street wall height shouldn't be rigid
- 3-6 storeys is appropriate
- Concern with 10 storey
- Shoppers Drug Mart site would be good for taller building
- Look to neighbourhoods behind and the transitions
- Public realm setbacks – balance – comfortable pedestrian space
- 3-4 storey street wall
- Only a couple of locations for 10 storeys
- Variation in height is important
- Address lot consolidation
- 4 storeys is okay with appropriate setback (2 to 2.5 metres)
- No to taller buildings
- No limit on height – based on site by site
- Lot consolidation leads to bulky buildings
- Lack of trust; need to build trust

#### **Feedback from Question 2**

- Division and Princess
- Concession and Princess
- 10 storeys or as big as site will allow
- Shoppers Drug Mart site
- 6 storeys between the two ends



## **WMSS Update – Workshop Summary (February 12, 2020)**

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- Design is more important than height
- Business/office near hub

### **Feedback from Question 3**

- Seasonal uses – flexible uses – parking in winter, food stalls in summer
- Bike lanes are not safe – can they be separated?
- More mixed use equals fewer cars
- More green space needed for multi residential
- Two way bike lanes
- Conflict: bikes lanes vs. other uses (i.e. loading zones)
- Parkettes at key intersections
- Greater setbacks for amenities
- Year round commercial

### **Feedback from Question 4**

- Need for human scale
- Increased setback from sidewalk
- Shadows – how to handle shadows that are cast?
- Walking and safety. Too many people/traffic
- More public spaces/cafes
- Street trees, furniture, patios
- Angular plane. Width of right-of-way
- Cycling and safety and sight triangles

### **Other Comments**

- Frustration – issues are repetitive of 2012 study
- Suspicious of City:
  - o Language used
  - o Developers and Residents. Perceptions – Lack of trust in process

### **Parking Lot Topics**

- What are the differences between what the study approved versus what is taking place?
- General management (at the City) should hire an architect
- Check population projections (page 80 WMSS)
- Purchase car lots for parks

### **Ad Hoc Feedback**

- Width of right of way
- Angular plane and access to sunlight/sky
- Question: Is angular plane realistic?

**Question & Answer Session – Land Economics Q&A**

This question and answer session was held as a virtual Zoom meeting on the evening of October 14<sup>th</sup>, 2020. The session was held by the City and open to the public. Residents had a chance to view a short summary presentation, and to ask consultants about the land economics report completed by Watson & Associates Economists Ltd. Attendees were also able to ask planning staff for clarification on how they are using the land economics information to inform their recommendations.

The following table provides a transcript of the questions asked and answers provided at this virtual meeting. A recording of the meeting is available on the City’s YouTube channel at: [https://www.youtube.com/watch?v=5Z1Qr\\_9Az5c&t=4028s](https://www.youtube.com/watch?v=5Z1Qr_9Az5c&t=4028s)

**Respondents:**

- Paige Agnew – Commissioner, Community Services, City of Kingston
- Andrea Gummo – Manager, Policy Planning, Planning Division, City of Kingston
- Erik Karvinen – Manager, Watson & Associates Economists Ltd.
- Brent Toderian – Planning Consultant, TODERIAN UrbanWORKS

#	Question	Answer
1	Unless I missed it, it would be helpful to know how many people are participating in this public engagement exercise.	<b>Andrea Gummo:</b> It's interesting we can't quite see the group like we can when we're in Memorial Hall or one of the city facilities, but we can look at the participants in the zoom meeting and it shows all the attendees. I see 20 members of the public who are participating in this Q&A. There could also be others watching on YouTube. I haven't checked how many viewers we have right now.
2	How would a condo relate to a rental building - can Erik comment on that?	<b>Erik Karvinen:</b> Sure. We did not specifically look at a condo development in this context. We have looked at it elsewhere in the city in Kingston at other locations and I would say that generally you would see similar observations on feasibility. It is a different product and the structure of the pro forma would look quite different. One of the challenges with rental development specifically is that you need to look at it over a 25-year or a longer-term time horizon with respect to cash flow. A condo project, because it is based on sale of units, the time frame would be quite different and so ultimately the pro forma would be structured quite a bit differently; but, ultimately the observations that we've seen to date within the local context would suggest that the feasibility outcomes would be quite similar. The

#	Question	Answer
		<p>absolute numbers in terms of return on investment would look different, but then the discount rate and the internal rate of return assumptions would differ as well for condo projects. So, at a very high level, I would say the feasibility observations would be very similar to the rental development presented here if you were comparing it in terms of development parameters apples-to-apples, but ultimately the metrics themselves would look somewhat different.</p>
3	<p>How did you determine a 10-15% internal rate of return (IRR) is sufficient?</p>	<p><b>Erik Karvinen:</b> Well, we've looked at this in many markets across Ontario working in other jurisdictions on similar types of feasibility assessments, whether it be in the Greater Toronto Area and other parts of Ontario, and so this is probably one of the more challenging parts of doing a pro forma analysis is establishing that threshold. There is no precise number that one can say it's going to be exactly that. And again, the reason for that is because every developer, any one individual doing a pro forma analysis, is going to have different assumptions on their appetite for risk and uncertainty and their willingness to take on a project. So that IRR metric is going to vary, and this is why we focused more on a range here of 10 to 15 per cent. But the one challenge with purpose-built rentals is that there isn't a higher element of risk related to projects of this nature than let's say for a comparable condo project and mainly because of the upfront capital requirements that are payable by the developer as well as the longer-term uncertainties and risks associated with revenue streams and operating costs. And so generally it's safe to say that for purpose-built rentals that IRR threshold needs to be higher than for a comparable condo project. So like I said, this is based on an industry average range of 10 to 15 per cent but the exact IRR that might be applied in any one specific feasibility assessment will likely range considerably within that min/max that I've identified.</p>
4	<p>I'm confused why we would be proceeding with a new policy framework that has been proven not to be economically viable.</p>	<p><b>Andrea Gummo:</b> That would be confusing, I agree. Actually, we're recommending that we not proceed with the current policy framework that's not viable. We're recommending changes. So that includes reducing parking requirements and we're also just very open to feedback from the development community in the</p>

#	Question	Answer
		industry, specifically on what kinds of tweaks we can make still staying within that that six-storey height that could increase viability and support that.
5	What happens at the end of 25 years when presumably the largest cost -financing - is significantly reduced.	<b>Erik Karvinen:</b> Sure, well the approach that we've taken with the pro forma is that it's been completed within a fixed time horizon of 25 years. It's a standard approach that allows for the ability to be able to assess feasibility within the context of a purpose-built rental project. Having said that, we recognize that the project itself would have obviously life beyond the 25-year period you know extending many decades beyond that of course. So, the way the pro forma has been set up is that if we were to extend that beyond the 25-year period and of course you can already see it illustrated. You know through the consecutive years moving towards that 25-year time horizon is that your cash flow consistently improves year over year meaning that the first few years are clearly well in the negative in terms of cash flow due to the development costs. And of course, you know, challenges with higher vacancy rates and those sorts of assumptions built in but ultimately, over time, that cash flow will continue to improve and by 25 years plus when there's no longer financing costs associated with the development clearly the development would be in a much more positive position. So the way we've treated that in the pro forma, because we have capped it at 25 years, is we have assumed that at year 25, that development will be sold by the developer (i.e., landlord) at a market value of that project and so that's been factored into the feasibility project and that cash flow generated from the sale of the building counts towards the overall feasibility analysis and so that is the manner in which we've been able to sort of recognize that that asset has value at the end of that 25-year period and does contribute positively to the pro forma.
6	What is your opinion to half (partial) storeys above Level 6 to support economic viability?	[asked for additional clarity – see question number 11 below]
7	Why would you reduce parking when it is so vital for retail?	<b>Andrea Gummo:</b> That's a really good clarification. So, what we're recommending is reducing the parking requirements specifically for residential units. At this

#	Question	Answer
		<p>point we're not recommending a big change for the parking spaces that are required for the commercial elements of a development in recognition of the fact that they are very desirable for retail and for certain commercial tenants to be able to commit to a space.</p>
8	<p>Are the only updates to the Williamsville study that are under consideration ones that will benefit developers? What about the concerns that have been raised by existing residents about whether that MUCH development in a short time period is necessary or beneficial for Williamsville?</p>	<p><b>Andrea Gummo:</b> So, it's my opinion that this is not about benefiting developers. This is about having good land use planning policies that that have good public interest outcomes that also lead to construction, because we know in the city right now we have a housing shortage and so we're looking at a lot of our policy frameworks and really trying to get the type of development that we want in the locations that we want. The recommendations that we're making for Williamsville represent part of that piece for this area of the city. This is what we're recommending. Now, overall in terms of the city's growth, we're actually only allocating about five to seven per cent of the city's growth over the next 25 years to this area of the city. So, although it is it has been a rapid change recently and represents a lot more development than certainly this area of the city has seen any time recently, in the long run it's actually not even close to the majority of the city's growth which I think is an interesting piece of the puzzle to keep in mind. In terms of the short term period, it's really interesting because once a municipality puts zoning permissions in place, anyone can apply to build to within those zoning permissions. We have existing zoning permissions in the corridor for a very long time and it's interesting that it's really only recently that we've seen a large uptake in development. Certainly this study originally when it was done in 2012 was very well-timed because it basically just got ahead of what we saw as like a little bit of a mini boom in the in the Princess Street corridor through Williamsville. I hope that helps a little bit to put things in perspective</p> <p><b>Brent Toderian:</b> Well I would just add that I wouldn't want us to lose sight on what is probably the most significant move in this work in its entirety which is to reestablish the six story prevailing scale by taking away the loophole that has allowed ten-story buildings anywhere where you can meet the land depth requirement. That is the number one thing we heard</p>

#	Question	Answer
		<p>from the community that they wanted coming out of the earlier study: the clear idea that the interpretation of what was promised and said in that work was to have a prevailing six-story scale corridor, and that is what these changes will deliver. I certainly wouldn't characterize that as doing something in favor of developers because I suspect many developers are not happy with that change. But, from the perspective of what the community has asked for, that is a very significant move that would over time in the context of the viability analysis we've done established the type of scale that was originally contemplated in the original study.</p> <p><b>Andrea Gummo:</b> That actually also reminds me of just one other consideration here. We've heard concern from residents generally across the central portion of Kingston about substantial redevelopment in existing residential neighborhoods. So our hope in planning services is that by concentrating increases in development to areas like the Williamsville Corridor then it sort of takes the pressure off those surrounding residential neighborhoods and it allows the growth to happen in a major corridor or a major artery of the city.</p>
9	<p>Could you speak to building materials at 6 storeys and below, and exceeding 6 storeys, and a change of building materials where costs may be significantly different? You chose a wood construction in your example, did you run numbers on concrete and steel and model it?</p>	<p><b>Andrea Gummo:</b> Great question. So, one of the things that we're coming to learn more about as we look at financial viability is that the construction and materials makes a huge difference to the cost. Our understanding is that wood frame construction is substantially cheaper than concrete but also of course under the Ontario Building Code wood frame construction can only go up so high. So right now it's permitted to go up to six stories. There has been discussion of switching to the national building code, and as part of that there's been discussions at the provincial and kind of national level of bringing wood frame permissions even higher to allow buildings be built out of wood to go higher than six stories. At this point, that hasn't happened yet though so we're definitely working within the current requirements of the building code. Now in terms of we did look both at wood and concrete and when I say we, I mean Erik, and essentially my understanding is because of the cost of the concrete the wood frame one was slightly more favorable so that was why we wanted to highlight</p>

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		<p>it today to go through it with you but the concrete one was very similar but the construction costs were higher.</p> <p><b>Brent Toderian:</b> That's a great summary Andrea. Yeah this is an important discussion point and probably speaks more generally to doing feasibility work in that it's very sensitive to changes in assumptions on cost and revenues, for that matter. When construction costs account for eighty per cent of the total development costs, as I identified in the in the tables clearly, even marginal changes in those construction costs on a per square foot basis can have a significant impact on the feasibility outcome. So as Andrea mentioned definitely a wood frame construction is clearly less expensive and we've calculated it to be about 10 cheaper on a per square foot basis for a six story development and hence certainly from a feasibility perspective the wood frame is definitely more favorable as far as an outcome on the financial viability of the project. If I can just add, Andrea, for those of you who might be wondering notwithstanding what was said in the original study why six (why not seven or why not eight), until the provincial building code is changed to allow taller wood frame buildings, and if indeed that happens it would change things, up till now there is a there is a jump of cost that happens as soon as you go above six stories. So if, for example, we decided through this exercise to allow eight-story buildings instead of six, what that would do is make property owners assume that because of the additional density the land is worth more but because of the additional cost of having to go to construction when you go to those higher stories, it may not necessarily actually be more viable than a six-story wood frame building. That's, I call it the gap, it's something we see in city after city based on the land economics, and the gap is bigger based on the differences in land economics in different cities. So as counter-intuitive as this may sound, allowing a bit more density, a few more floors, doesn't necessarily do you any good, and it can actually do harm to your ability to achieve built projects because the land is assumed to be more expensive but it's actually not necessarily more viable to build an eight-story building out of concrete. What tends to happen is you have to switch from wood frame to concrete you have to build a lot</p>



#	Question	Answer
		<p>more floors and our best guess at this stage in Kingston is that's probably around about four floors which is why you see ten story buildings being attractive in the Kingston context, in the Williamsville context. So almost everything between seven to nine stories is a bit fictitious in terms of its viability. The numbers and the construction costs tend to lead a reasonable developer to conclude "I should either build a six-story wood frame, or, if I'm gonna build concrete, I need to build taller than just seven or eight stories. I really need to build probably about ten - maybe nine - but probably about ten." So we get into this almost reality that that says we really need to either set it at six stories or ten stories to be realistic, and ten stories as we've seen in the discourse is just substantially different as a prevailing scale than what was anticipated in the 2012 study and what's been anticipated in the planning for the corridor. So that gap of viability from wood frame to concrete construction is actually incredibly strategically important to the planning of the area so I really do appreciate the question.</p>
10	<p>Is it possible to show us a proforma for a 6 storey build under the proposed framework to show that it works? How different could it be than the present 6 storey permission.</p>	<p><b>Andrea Gummo:</b> At this time, our plan is not to test the policies further. What we really wanted to do was test the policies that are in place now and then from there start to work towards hopefully policies that support viability. I think again, the way that we're using this pro forma information is not so detailed that we would like to run all of our policies through it and test them because as Erik mentioned, there's so much variability. Really when we're doing this prototypical development and testing its viability, it's really about getting a basic understanding of the financial realities, and less about testing individual policies and kind of seeing how they impact the viability as we adjust the dials on them, again, in part because I think it would be different based on the site and based on the applicant and what's being proposed. In terms of "how different could it be", that's really something that we're looking to the community and the industry for input on, so we're really looking to understand what types of changes that we can look at making that will support viability while maintaining that six story height. I also know from other policy projects we've heard a lot from industry that</p>

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		<p>some of these small costs really add up. Additional studies, additional parking requirements, there are just some elements that maybe on their own don't represent a huge cost but when taken all together they really do, and so that's really something that we're trying to target here. We're trying to basically do the studies up front through our policy work so that there's less need to do those additional studies. And again, we're just also looking for input from the community to leverage that knowledge to understand how the different details impact viability.</p> <p><b>Erik Karvinen:</b> I should mention, and maybe it wasn't clear in the presentation, but in looking at the feasibility outcome for scenario to be at eight and a half per cent IRR, and if we assume a 10 minimum IRR as sort of the minimum threshold required, you're within reach. You know, I've done a lot of feasibility studies where those feasibility outcomes are much less favorable and the gap between that eight and a half and ten percent is much larger in many other instances. So your gap there in terms of feasibility is marginal, and so what it suggests to me is that there is an opportunity to work and examine various planning tools or other tools to improve the feasibility. Now, parking standards could be one area there could be some other sort of approaches, especially in terms of just getting development to receive approval in a more timely manner. There's a number of factors that can make a difference, especially if they're combined. It's unlikely that any one item would be sufficient, but in combination would make the difference in this case and so it does look very positive from that perspective in terms of being able to work towards a more favorable outcome</p> <p><b>Brent Toderian:</b> And Andrea, maybe I will just add this. I think it's really important for everyone to understand from a policy creation perspective and from the perspective of what city hall should care about when we think about what Erik has told us. We've got a viability issue for an average standard project. It's within reach though, as Erik says, so that means it's very susceptible to either favorable differences or unfavorable differences. But our answer to the question "why are we proceeding with something that that</p>

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		<p>doesn't meet the favorability test” is the key question, I can see why that would be confusing and I think Andrea's already stressed, and I really want to stress, that's the point of us making such an important stressing to Council and everyone that if we do want this six-story prevailing scale to be viable we are going to have to do some things differently. First of all, the fact that that's an average project means that some projects will proceed and some projects won't. It depends on what you paid for land, how long you've been holding the land asset, even your borrowing rate power of your developer company versus another one. So there's a lot of variables on a developer-by-developer basis that could determine whether you would be “go” or “no-go”. We do expect that some projects would find it favorable and others wouldn't, but we're not satisfied with that. We want many of the projects to be able to proceed because this corridor, as we said, is an area that we've called part of our green light strategy. It's an area that we actually would like to see more and faster infill occurring as opposed to development further out in a more car dependent pattern. So we've mentioned parking a few times, but I don't want to make it sound like it's just all about reducing parking, because there's developers on the call who are probably thinking “well, what if I don't want to reduce parking what if I want to build all the amount of parking.” So, it's a number of different things and we really are going to be looking at all the levers that a municipality can exercise to make these projects more viable in the short- to medium-term. That includes pre-zoning rather than re-zoning, providing not only time saving and the certainty associated with not having to go to council for rezoning, but also dropping your soft costs associated with consultants and other processing costs associated with getting the rezoning process done. That saves you time, other costs and fees associated with things. We're looking at all the different fees incentives including the existing municipal tax incentive for multifamily. We're thinking about, if we reduced it or we waived it, would it actually make the project more viable, or would it just send a message to the marketplace that “now the land is worth more”, which we don't want. So we're thinking about all these</p>

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		<p>kinds of levers to think what will do the job that we want to make the project more viable without increasing land value, because we actually do want the land value along this corridor to lower because it's been artificially inflated over the last number of years. So whatever the things that we're going to be doing the things that can make project viability increase without land value increasing.</p>
11	<p>If the building height is limited to 6 storeys, can additional partial storeys be looked at to add density/rental area?</p>	<p><b>Andrea Gummo:</b> To add density or a rental area? And I'm guessing that you're thinking of, when you say partial, like not covering the whole floor plate of the building, so it's just part of the building kind of goes up a little higher? So, we've been at this point where we're not contemplating additional height beyond six stories for the midsection of the corridor. For other areas of the corridor, we're recommending a podium of six stories with a tower on top that's limited in its floor plate size and that's in part to add density for sure.</p> <p><b>Brent Toderian:</b> Can I just add quickly to that that the only exception to that - and that's a correct answer - but the only exception is that we have built-in ability to exceed six stories for the architectural pertinences and the elevator extension, etc. So it's not a hard line where you're trying to figure out "well, how are we going to accommodate the things that are necessary on the roof?" Those things can exceed the six stories, but that doesn't give you the permission to build additional habitable space above the six stories. The other thing I'll say is in the answer to the question about retail, one of the things we are contemplating, and Commissioner Agnew may wish to add to this, is we've contemplated not requiring you to build less parking if you are retail, but allowing you to. In other words, potentially taking away the parking minimum for retail, but not establishing a maximum. So, if you want to build more retail parking, you can, but you don't have to. If you see an opportunity or an advantage from a cost-savings perspective and can make that work relative to the type of building program you're anticipating so more flexibility a potential cost savings but if you don't want to realize that and you want to build more parking for</p>

#	Question	Answer
		the retail commercial side you would be able to. That's something we are at this point considering.
12	Correct...	[dismissed]
13	What will the City do if no one financially can build what you envision?	<b>Andrea Gummo:</b> So again, I think really what we're trying to do is give more support to the financial viability of projects and we're just we're continuing to look for input from industry experts in terms of whether we're getting close.
14	So could I ask you to confirm that nothing will be over 6 stories in the entire area of Princess between Division and Concession?	<b>Andrea Gummo:</b> What I can confirm is what we're currently recommending that planning committee recommend to council for approval. So, that is a six-story height cap on the area of Princess Street. It actually doesn't start right at Division, it starts kind of mid-block towards where University and Chatham connect there, and so from that point towards Concession at this point we're recommending a six storey cap. For the corner of Division and Princess, we're recommending a 20-story height limit in those locations to allow some taller buildings around that corner. That is subject to council approval, so that's what staff is recommending and then we'll see what council decides to do in terms of actually bringing that into by-laws and into the official plan.
15	To create complete communities with Kingston's central business district, are you considering density bonusing to encourage the construction of spec office space in Williamsville's future residential developments?	<b>Andrea Gummo:</b> It's not a specific recommendation or consideration, but we approach that idea with interest. I think any additional input that people have on that idea we're very open to it because we do recognize that it is difficult right now to get new office space constructed.  <b>Brent Toderian:</b> Two things, I think we need to be very careful in our messaging on so that there's no confusion: if we mean density bonusing over and above the six stories then the answer is no. We don't want to send the message that it's a cap of six stories unless you offer something we want, because then we're right back into uncertainty around what the prevailing scale of the corridor is going to be. So it's connected to the answer to the previous question; a six-story cap is a six-story cap. The question about mixed-use in the context of a complete community is very interesting and certainly there's opportunities in the portions of the corridor where we're anticipating or considering taller buildings up to 20 stories there you

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		<p>might be able to do, and probably should do more mixed use for purposes of transit ridership, but complete communities walking biking etc. What I found in my work in all sorts of cities is trying to achieve mixed use through density bonusing is not necessarily a good tool. Frankly, there's other things we need to achieve through density bonusing and as many of you might know the province has really limited the ability of municipalities to use density bonusing as a tool anyway. But if you want to achieve more of a mixing of uses the best way to do it I've found is to actually mandate the mixing of uses in the zoning, and that's something that could be contemplated in the context of the taller areas. You can't do inclusionary zoning in the context of affordable housing because I believe your provincial government took that power away, but if you wanted to mandate a certain a square footage of office or retail, you can mandate ground floor retailing, you could mandate certain number of floors or a certain amount of square footage for retailer commercial. Those requirements would then get assessed into land value for the purposes of figuring out how much the land is worth relative to density. So there are ways that the city and planning staff can have a conversation about achieving a mixed use, I just wanted to sort of deflate your expectations about whether density bonusing at least under the current rules is going to be a particularly powerful tool in achieving that.</p>
16	<p>Why do you use current market rate rentals in your analysis? Advertised rental rates for the new apartment at University and Princess are considerably above those you posted in your presentation. Will higher rents in the Williamsville corridor make the 6 storey projects more viable?</p>	<p><b>Andrea Gummo:</b> We have seen in Kingston rental rates really shooting up over the past two to three years so - I think there's like a statistic that we're one of the highest increases in the country or something in terms of just overall increases in rental rates. So I think the rates of rentals are an important consideration here certainly at the city, as a whole part of the impetus for providing additional housing is that that tends to, in a small market like Kingston, to put downward pressure on rental rates. So we're hoping that by increasing the supply that rental rates will then correct somewhat in terms of being more affordable for people.</p> <p><b>Erik Karvinen:</b> We did try and utilize the latest information on market rents for recently built projects so we're not considering market rents more broadly in the local market so we do feel that's reflective of</p>

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		<p>newer builds and we do recognize that clearly there's a constant upward pressure on rental rates and that is reflected in our pro forma in terms of average annual increases in in rental rates. And so we do feel that they are representative of a project of this type in the Williamsville corridor, but of course like any other assumptions in the pro forma it can be tested with varying assumptions on rental rates which ultimately will have either a positive or negative impact on feasibility and clearly higher rental rates will be more favorable.</p>
17	<p>With all the vacant retail on Princess Street, is \$25.00/sq.ft. really attainable?</p>	<p><b>Andrea Gummo:</b> I do want to mention that specifically for the Williamsville corridor section of Princess Street we definitely are aware of that there are commercial vacancies along there. We do also think that the commercial uses there will be better supported once there's an additional population in the buildings that are being constructed on Princess Street, so we do expect that situation to get a little bit better. But again, I think we're really open to input and feedback and experiences and just additional information that will help us understand this dynamic. And I guess in terms of the specific amount, did you want to speak to that at all Erik?</p> <p><b>Erik Karvinen:</b> The retail component is relatively small as far as the share of the GFA and the share of the rental revenue stream but obviously you know a lower rental rate for retail space would be would be you know would have a negative impact on the pro forma but it would be marginal in terms of its ultimate impact the Williamsville corridor is an interesting location because certainly based on existing conditions rental rates as you know seem audible alignment with current realities but as Andrea mentioned I think what we're hoping to see in the area as it becomes revitalized with greater local population base that there will be more demand for local population serving retail and related services and recognizing that the retail landscape itself is changing and evolving and traditional retailing certainly in terms of bricks and mortar is generally having many challenges in the market. It is very likely that much of that retail space that we have envisioned let's say for this type of prototypical development would be more in the form of services, possibly in the form of</p>



#	Question	Answer
		<p>food related or restaurants and eateries and that type of thing which generally would achieve higher rental rates than perhaps traditional retail space.</p>
18	<p>Thank you for the presentation and the detailed replies to the questions. I have 3 questions:</p> <p>1) Did the pro forma consider the land economics for existing property owners that may be interested in redeveloping their properties? While these property owners may not have land costs, they are unlikely to redevelop their sites at significant risk and expense without sufficient return, especially if their properties are currently profitable.</p> <p>2) I do not think I saw environmental clean-up and record of site condition in the assumptions. Are these potentially significant costs intended to be captured by the contingency?</p> <p>3) What is the intended approach if the measures discussed to improve economic viability (e.g. reduced parking) are found to be insufficient and result in the opposite of the intended goal for Williamsville's revitalization?</p>	<p>1) <b>Andrea Gummo:</b> Erik's work assessed purchasing property but I also want to say that we are we're very aware of the situation where the current use of the property, while maybe not optimal for the site, may be so successful at this time that there's no real motivation to change it. So, that's definitely something that we've talked about a lot in terms of you know what kind of permissions are actually going to lead to substantial redevelopment of some of those uses that that maybe aren't as desirable in the corridor over the long term. I think luckily for the corridor we also have a number of vacant sites. So, there are there are definitely sites with current existing robust uses but there are also sites that are entirely vacant so I think we're hopeful that in the short term we will continue to see additional development.</p> <p><b>Paige Agnew:</b> Relative to what our thinking is related to what we intend to do with the portion of the corridor that's closer to the Kingston Center, so up near Concession in the old traffic circle, although at this time we're not suggesting any significant changes with respect to the policy or density, there is a lot of work that needs to be done in that area of the city with respect to the alignment of the road network and looking at the road cross sections of what they're going to be to be able to facilitate the greatest efficiency of active transportation as well as our transit network. Certainly, when we're talking about that northern portion of the corridor, because there is such diversity that was something that was of significant interest to us looking at a number of the commercial businesses that are located in particular in the northern area of the corridor, where they are very successful commercially viable businesses and having that discussion. So I think there's definitely opportunity for further engagement on that and for us to gain better understanding relative to some of the insights of those property owners. Definitely something that we're aware of and has been part of our contemplation as we've been working on additional policy recommendations. We'll be going forward as we tackle that northern</p>

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		<p>portion at the same time as working on that with transportation services and our engineering group as well just so from a master planning perspective we're aligning policy planning with infrastructure improvements that have to happen to facilitate additional development within that portion of the corridor.</p> <p>2) <b>Erik Karvinen:</b> No specific provision was made for contamination or site cleanup, only a site preparation cost was built in which was based on an assumption that it was just for general site preparation with no contamination issues to deal with. Clearly, that would have to be looked at on a very site-by-site basis to confirm if there are any contaminations that need to be dealt with and one reason why contingency factors are built into pro formas is because there may be those sort of surprises if you will that may have to be dealt with for sure.</p> <p><b>Andrea Gummo:</b> It's a great question though and luckily the city does provide funding for brownfield redevelopment through a tool that the province allows which is called a community improvement plan, so when a proposal does involve contaminated lands there is some support from the city in terms of making that hopefully more viable because the goal really is to get those sites cleaned up.</p> <p>3) <b>Andrea Gummo:</b> We're making our recommendation to council to change the policies in next month, so in November, and then our intent is to continue to monitor the development activity in the corridor as we've done over the past seven or eight years since the original policies came into effect, and continue to basically just look at what makes sense there. We did in our current recommendations talk about doing additional policy work for the section of the corridor from MacDonnell to Concession in the future because we think that's a great location as well for high density, but some of the details around servicing still need to be sorted out in that area. So all this planning policy is intended to change and evolve and be a living documents and that's very much the way that I'm approaching this work too.</p>

#	Question	Answer
		<p><b>Paige Agnew:</b> The one thing that I wanted to identify and of course as part of the role that we provide to the municipality in terms of long-term planning and strategic planning and master planning that spans between multiple departments; we're always evaluating what's going on in the city, so how development is responding or not responding in certain areas, how does that match up with our long-term goals, the state of priorities of our council... The other thing I think will be very interesting to see unfold over the next couple of years is going to be, we have over 2000 units that have been approved that have not yet been occupied in the corridor that are at various stages of construction. I think what we're likely to see if anything in the shorter term is potentially the result of those units being absorbed into the market and looking at the overall impact of that from a vacancy rate perspective and seeing where we land in terms of actual supply and demand, because it does represent a large number of units. What I suspect we may see is just some reaction or market reaction to that as those units come online and a large number of units coming into the market all within a fairly short period of time and seeing how quickly they're absorbed. But certainly, as Andrea indicated, there's an ongoing commitment to looking at this. I think it's part of what any city planning department does is it has an obligation to constantly be reviewing its policy. As we always say, our policy documents they're not static and that they sit on the shelf forever and specifically with the provincial government we have right now they've changed things pretty much every other month for us in the last 12 months with respect to key planning legislation, so that's an ongoing piece that will that we'll be reviewing as well, as well as the impact of whatever policies end up getting supported by council and approved, and we're not at that point yet.</p> <p><b>Brent Toderian:</b> The only thing I'll add to that very good answer is I've been involved in that kind of forensic exercise with many planning departments over time: the "what do we do if the economics don't exactly match up with a public policy objective." It's not as simple as, well "yes or no we'll do something else". Ask yourself from a public interest perspective, is it</p>

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		<p>okay to do buildings twice as high as anyone contemplated because that happens to be what the performance says works well? There may be many reasons why that height and scale of building just isn't... no one's interested in contemplating that. So, you don't always get the perfect match of what you'd like to see happen and what's viable in a given time. The question is, why is it a matter of things that will change over time? Is it another problem that city hall is creating through an accidental disincentive? And we've seen examples of that. Can we think about it in the context of short-term incentive programs that help you bridge the gap, but with a sunset clause so they don't change land value over time? There's all sorts of ways you can thread the needle on a conversation about how to address that gap in viability without going "well, gee, it's not working. I guess we have to start from scratch with a different vision". So I think what we're trying to build, not only in this exercise but in everything the planning department does under Paige's leadership, is have a high level ability to understand the land economics, to understand the levers and triggers that affect your ability to achieve public policy in the short, medium and long term, and be able to react strategically, nimbly, and effectively to try to achieve better public interest outcomes. But a lot depends on the public interest implications of a particular project not happening. If one project doesn't happen, but two others are happening, if one block is not transforming yet, and can't, but another block is, we think about the implications of it all. We ask ourselves why, and we think very strategically and in a scalpel-like way about what to do about it.</p>
19	Is there any concern that the new direction will stop development all together?	<p><b>Andrea Gummo:</b> I think your question is similar to Youko's, and I think we've just addressed it. Feel free to follow up with us directly if that didn't cover that but I have heard that concern both from residents and from members.</p>
20	How do you know that future developments will be rental apartments rather than condos?	<p><b>Andrea Gummo:</b> So we don't actually have control over that, that's not something that we can plan for in terms of our planning legislation.</p>

#	Question	Answer
21	<p>In the interest of facilitating development of a lively community along Princess, are you planning to increase the setback to allow wider sidewalks, patio space, etc. Also, where do you envision additional green space?</p>	<p><b>Andrea Gummo:</b> That's a great question. So, yes, we are recommending that we increase the setback. Right now, the requirement is for a one meter setback and we're recommending along Princess to increase that to three meters. So that's really quite a substantial change that we're doing very specifically to allow wider sidewalks, a more comfortable and usable pedestrian realm, and including spaces for patios, social interactions, all that good stuff. So that's definitely something that we're recommending. For where do you envision additional green space, we're pursuing options when we can to create small parkettes as part of developments. There's definitely no plan for a large city park along Princess street at this point, that's not in the parks long-term planning. But we are hoping through some of these smaller parkettes to have a little bit more greenery and more open space along the corridor.</p> <p><b>Brent Toderian:</b> I'll just add Andrea that, in addition to the three meter setback, for any developers on the caller thinking "boy, that's a big effect on my on how much I can build on the site", which it is above the first floor, we're allowing a one meter cantilever for the second third and fourth floor. That's not deep enough to create an arcade, which has some urban design problems associated with it, but it is enough to give a little larger floor plate a little more square footage viability. We've really tried it and that really illustrates how we've tried to balance our objectives for public ground usability but also project viability and that cantilever is actually that kind of balance in action.</p>

**Appendix I: Proposed Boundary Changes to the Williamsville Main Street**

**Official Plan Amendment: Proposed Changes to Land Use Designations**

<b>Address</b>	<b>Proposed Change</b>	<b>Rationale</b>
424 Princess Street, 170-174 Division Street and 17 Garret Street	Re-designate from Central Business District to Main Street Commercial on Schedule 3-A, Land Use.	This property forms part of the main street corridor. Its re-designation allows for more effective redevelopment at the intersection and provides for a distinct transition from the Central Business District designation of downtown and the Main Street Commercial designation of Williamsville.
429 Princess Street	Re-designate from Central Business District to Main Street Commercial on Schedule 3-A, Land Use.	This property forms part of the corridor. Its re-designation allows for more effective redevelopment at the intersection and provides for a distinct transition from the Central Business District designation of downtown and the Main Street Commercial designation of Williamsville.
192, 196 and 198 Colborne Street	Re-designate from Residential to Main Street Commercial on Schedule 3-A, Land Use.	This change will allow for greater land use compatibility with surrounding properties. The current Residential designation and zoning, and small parcel size, would not allow for effective transition to adjacent properties. These properties also have ties to the hub at Princess and Division Streets, so their inclusion allows for the whole area to be considered under one designation.
362 Alfred Street	Re-designation from Main Street Commercial to Residential on Schedule 3- A, Land Use.	This property is in the “B3” Zone, which better aligns with the Residential designation. The abutting development proposed at 555 Princess Street precludes this property from any effective six-storey redevelopment. Providing for a designation that reflects the current development on this and adjacent sites also supports the maintenance of the Alfred Street historical

<b>Address</b>	<b>Proposed Change</b>	<b>Rationale</b>
464 Frontenac Street	Re-designate from Residential to Main Street Commercial on Schedule 3-A, Land Use.	streetscape. This property contains several municipal addresses, the rest of which are already within the Main Street Commercial designation. The whole property, including 464 Frontenac Street is under one site-specific commercial zone. This change will bring the entire property within the Main Street Commercial designation. This designation will also align with the Main Street Commercial designation limits across Frontenac Street.
457 Albert Street	Re-designate from Residential to Main Street Commercial on Schedule 3-A, Land Use.	The extension of the Main Street Commercial designation will better align with the site-specific commercial zoning already existing on the site and will align with the Main Street Commercial designation boundary to the east.
510 – 516 Albert Street	Re-designate from Residential to Main Street Commercial on Schedule 3-A, Land Use.	These properties contain a rowhouse that would likely redevelop together. One address of the row (508 Albert Street), is already within the Main Street designation. The re-designation of the remainder of the row allows for a more effective fabric for potential redevelopment, and better aligns with the Main Street designation boundary across Albert Street.
840 Princess Street	Re-designate portion of property from Residential to Main Street Commercial on Schedule 3-A, Land Use.	This is part of the existing hotel property and it has a commercial zone on it. The redesignation would bring the entire property into the Main Street Commercial designation.



**Zoning By-Law Amendment: Proposed Changes to Zoning By-Law Number 8499**

<b>Address</b>	<b>Proposed Change</b>	<b>Rationale</b>
424 Princess Street, 170-174 Division Street and 17 Garret Street	Re-zone from the "C" Zone to the "C4-H (T1)" Zone.	Forms part of the main street corridor; allows for more effective redevelopment at the intersection. Aligns with proposed re-designation to Main Street Commercial.
429 Princess Street	Re-zone from the "C" Zone to the "C4-H (T1)" Zone.	Forms part of the main street corridor; allows for more effective redevelopment at the intersection. Aligns with proposed re-designation to Main Street Commercial.
210 Colborne Street	Re-zone from the "B3" Zone to the "C4-H (T1)" Zone.	Align "C4-H (T1)" zoning with the Main Street Commercial designation boundary. Improve conformity of zoning with the Official Plan.
192, 196 and 198 Colborne Street	Re-zone from the "B3" Zone to the "C4-H (T1)" Zone.	Align "C4-H (T1)" zoning with the proposed Main Street Commercial designation boundary to ensure conformity of zoning with the Official Plan.
562 Princess Street	Re-zone from the "A" Zone to the "C4-H (T1)" Zone.	Align "C4-H (T1)" zoning with the Main Street Commercial designation boundary. Improve conformity of zoning with the Official Plan and reduce split- zoning of properties.
465 Albert Street	Re-zone from the "A" Zone to the "C4-H (T1)" Zone.	Align "C4-H (T1)" zoning with the Main Street Commercial designation boundary. Improve conformity of zoning with the Official Plan.
508-516 Albert Street	Re-zone from the "A" Zone to the "C4-H (T1)" Zone.	Align "C4-H (T1)" zoning with the proposed Main Street Commercial designation boundary to ensure conformity of zoning with the Official Plan. Place entire rowhouse in the same zone. Align with Main Street Commercial designation and commercial zoning across

<b>Address</b>	<b>Proposed Change</b>	<b>Rationale</b>
		the street.
410 MacDonnell Street and 75 and 83 Durham Street	Re-zone from the “A” Zone to the “C4-H (T1)” Zone.	Provides consistent approach with zoning boundary along Durham Street to the east. Improves consistency of zoning with the Official Plan and reduces split-zoning of properties.
315 Regent Street	Re-zone from the “B3” Zone to the “C4-H (T1)” Zone.	Provide better conformity with the Official Plan designation. The newer “C4-H (T1)” Zoning offers more up-to-date zoning provisions for the type of future redevelopment likely to be seen on this size of parcel.
474 and 480 MacDonnell Street	Re-zone from the “C1” Zone to the “C4-H (T1)” Zone.	Align “C4-H (T1)” zoning with the Main Street Commercial designation boundary. Improve conformity of zoning with the Official Plan. Introduce more up to date C4 zoning to align with surrounding properties.



## Memorandum

**To:** Paige Agnew, Commissioner Community Services  
**From:** Jim Miller, Chief Operating Officer,  
Utilities Kingston  
**Date:** October 5, 2020  
**Subject:** Williamsville Main Street Study  
Supplemental Infrastructure Update - Water

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Further to the infrastructure capacity assessment information provided to Planning Staff for the August 13, 2020 Planning Committee meeting, Utilities Kingston has additional information for consideration by staff and the committee. Utilities Kingston has undertaken additional review activities since the meeting to further assess the ability of the water system within the Williamsville Main Street Area to provide adequate “fire flows” where wood frame buildings are the preferred choice of construction. We recognize the policy intent to incentivize that form of construction to promote affordable housing, but we also must acknowledge the negative impact this creates on the water system to provide appropriate fire flows.

The existing water infrastructure within the Williamsville Main Street Area is sufficient to meet potable drinking water needs and can provide sufficient fire flows for fire suppression where non-combustible building materials are used (i.e. concrete, steel etc.) at any height. The use of wood, which is a combustible building material, creates a significant change in required flows. For example, our assessment of two hypothetical 6 storey structures, one built with wood, the other of non-combustible material, creates a 50 percent increase in the required volumes of water needed to suppress a fire for wood framed buildings.

- 6 Storey – wood frame – fire flows: 400 litres per second
- 6 Storey – steel/concrete – fire flows: 268 litres per second

Utilities Kingston assessment of required fire flows is based on accepted industry standards that have been adopted by municipalities across the Province and originate from the report: *“Water Supply for Public Fire Protection”*, published by the Fire Underwriters Survey (FUS). It is admittedly, a conservative methodology and that other methodologies such as that found in the Ontario Building Code and others based on land use, do result in differing requirements, usually less than FUS results. Currently however the City of Kingston/Utilities Kingston employs the FUS standard. Utilities Kingston and Fire Department staff have discussed this issue and have initiated a process to review fire flow standards for the City. The results of that review would not be available until the Second Quarter of 2021.

In addition, Utilities Kingston initiated field testing along the Williamsville Main Street Area on two separate occasions since the August meeting. Field testing is intended to validate actual water system performance versus system modelled flow results. For technical/engineering reasons, accurate flow test results in this area of the City are particularly difficult to achieve due to the presence of the Tower Street Elevated Water Storage Facility. As a consequence, while the results of field testing are encouraging, they remain inconclusive from a “numbers” perspective. The field testing has confirmed the observation that significant volumes of water appear to be available in this area.

In both field tests we were unable to achieve the required pressure drop to validate flow numbers suggesting significant volumes of water are available in this part of the system. Secondly, the fire event which occurred in 2013 involved “substantive” volumes of water being drawn from multiple hydrants in the area to suppress the event. There were no known adverse impacts to the system. In other words, the system performed well during that major event.

In our opinion it is therefore reasonable to conclude that the risk of the existing water system being unable to support up to 6 storey wood frame constructed buildings under fire flow conditions to be minimal. Utilities Kingston would continue to review site specific development proposals in order to assess building size, sprinklers, building setbacks to adjacent structures, etc., which are all aspects

that impact required fire flows. Based on the work and assessments completed to date with respect to water system performance, Utilities Kingston is comfortable in offering general support for wood frame structures within the Williamsville Main Street Area subject to the normal plan review process the City undertakes.

Utilities Kingston would also draw to attention, the pending capital infrastructure works for part of the Williamsville Main Street Area that involve Princess Street from Division Street westerly to Alfred Street. This work involves both sewer and water main replacement which when completed will improve available water volumes for fire flows within that stretch of the Main Street Area. This work is scheduled for construction in 2022.

In summary, recent assessment of the infrastructure suggests adequate flows are available for fire suppression activities, a standards review of required fire flows will be initiated, pending capital infrastructure work will continue to improve available fire flows and normal planning approvals process will ensure all life safety factors are addressed.

cc. Jim Keech, President and CEO,  
Utilities Kingston

Shawn Armstrong, Director/Fire Chief,  
Kingston Fire & Rescue