February 2019

DILLON CONSULTING

LONDON TRANSIT COMMISSION

Five-Year Service Plan

(2020-2024)

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1.0 INTRODUCTION

Dillon Consulting Limited (Dillon) was retained to develop a Five-Year Service Plan which will be used to guide service changes in London between 2020 and 2024, and build toward the long-term transit network improvements identified in the 2035 Rapid Transit Integration Strategy Update.

The purpose of this study is to:

- Assess the existing transit service against the key performance indicators in the service standards document;
- Identify key concerns with the existing service as well as opportunities to enhance the service over the next five years;
- Build towards the future implementation of Bus Rapid Transit (BRT) in London;
- Identify service improvements on an annual basis that will enhance current performance, exceed community needs and increase ridership growth in line with the transportation master plan transit mode share targets; and
- Confirm annual service hour requirements and fleet expansion requirements over the next five years.

The report includes a review of existing services, a consultation strategy and the development of strategic directions (which addresses key issues and opportunities identified in the review). This was translated into a 2024 network plan, which was phased in over a five year period.

2.0 NETWORK ASSESSMENT

A comprehensive network assessment was undertaken to understand how the existing system is performing.

The following section examines the performance of the existing network against the Commission-approved London Transit Service Standards. This includes an assessment of the route structure, service quality, stop activity and route level productivity. This analysis informed the development of strategic directions and the five-year service plan.

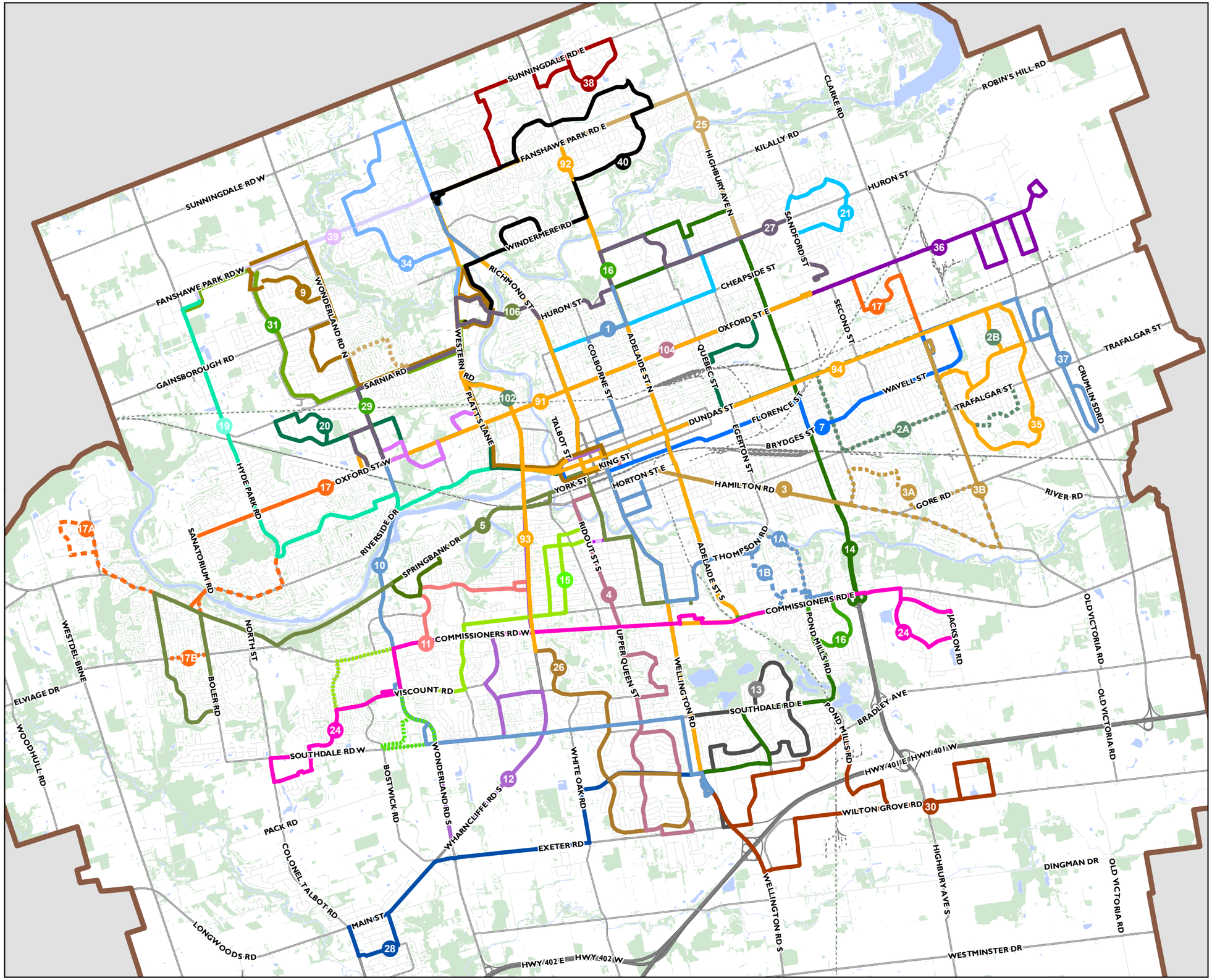
2.1 Route Structure

London Transit operates a multi-nodal system focused on the downtown, Western University and Fanshawe College. Other key destinations that serve as a terminus or transfer point include Masonville Place, Argyle Mall, Westmount Shopping Centre and White Oaks Mall. This network provides direct routes to many points in the City.

The London Transit Service Standards document identifies six route classifications that London Transit Commission operates. These include the following:

- Express;
- Base Arterial;
- Minor Arterial;
- Local;
- Industrial; and
- Community Bus

The existing route classification is displayed in **Figure 1**. In the future, the City anticipates the operation of Bus Rapid Transit on two major corridors which are not represented in this table. BRT service will operate on a more frequent basis on an exclusive right-of-way.



Five-Year Service Plan (2020-2024)

Figure #1: London Transit Commission Route Structure - 2019

- LTC Bus Route
- Municipal Boundary
- Railway
- Waterbody
- Vegetation

0 0.5 1 2 km

MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: SW
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 18-8035
STATUS: FINAL
DATE: 2019-02-12

Table 1: Existing (2018) Routes by Service Classification

Classification	Route						
Express	90	91	92				
Base Arterial	2	10	13	14	16	17	102
	104	106					
Minor Arterial	3	5	4	6	7	12	19
	20	21	25	26	27	29	39
Local	1	9	11	15	24	28	31
	32	33	34	35	38	40	
Industrial	30	36	37				
Community Bus	50	51	52	53	54	55	

2.1.1 Express Routes

Express routes focus on providing faster and more direct service to customers by operating on major corridors (e.g. arterial roadways) and increasing the distance between stops. These services are ideally designed to connect major destinations such as an employment hub or post-secondary school to high density development and major transit terminals. Express routes are typically viewed as a precursor to bus rapid transit because the environments which they operate have similar characteristics. Unlike bus rapid transit, express service lacks an exclusive right-of-way, advanced technologies and branding.

London Transit currently operates three limited stop express routes: Route 90 – Richmond/Wellington corridor between Masonville Place and White Oaks Mall, Route 91 – Oxford Road corridor between Fanshawe College and Wonderland Road, and Route 92 – Adelaide corridor between Masonville Place and Victoria Hospital. The fall 2019 service change will introduce two new express services: Route 93 – Wharnecliffe/Western Road corridor between White Oaks Mall and Masonville Place and Route 94 – Dundas corridor between Western University and Argyle Mall. Express routes have been fairly successful and positively received by London Transit customers.

2.1.2 Arterial Routes

Arterial routes provide coverage to all major destinations in London along major arterial corridors, serving all stops with minimal deviations, with the exception to service key destinations (e.g. Downtown, shopping malls, universities / colleges etc.). These routes will generally provide a higher level of service (i.e. frequency) than Local Routes.

There are two types or arterial routes, these include:

1. **Base Arterial Route:** Designed so that over 70% of the route operates on one or more arterial corridors providing direct two-way service connecting two or more transit villages (as

defined in the London Plan) and/or major destinations. These routes are typically the highest performing routes in the system and therefore are planned with a high level of service.

2. **Minor Arterial Route:** Designed to provide direct two-way service, operating on a combination of arterial and collector road corridors and connecting one or more transit villages and/or major destinations. These routes typically attract less ridership than Base Arterial Routes and therefore are measured against a lower ridership performance standard.

There are currently nine base arterial routes and fourteen minor arterial routes in operation.

2.1.3 Local Routes

Local routes are designed to be feeder routes to high frequency base arterial or express routes. They provide access to local neighbourhoods and activity centres on collector roadways. These routes are typically measured against a lower standard than other higher order routes, therefore productivity targets and minimum service levels are lower.

LTC currently operates thirteen local routes.

2.1.4 Industrial Routes

Industrial routes provide connections to and from major employment centres – typically business parks or industrial areas located on the fringe of the City. The services are tailored to match start and ending times of shift workers at these facilities with limited operating periods depending on demand and performance. The provision of service in large business parks or industrial areas can be challenging with fixed-route transit, due to the staggered shift times, low densities and the car-centric nature of such areas.

LTC currently operates three industrial routes in the City.

2.1.5 Community Routes

Community Routes are circuitous in nature and designed to maximize front door connections to local destinations and activity centres. They are specifically tailored to meet the needs of seniors and persons with disabilities, providing direct connections to medical facilities, seniors' apartments and retail.

LTC currently operates five community routes in London.

2.2 Service Levels

Service levels define the duration and frequency of routes in London. Depending on the route typology, routes have a set minimum headway target (i.e. frequency target) to ensure service provides sufficient availability and convenience to customers. This target communicates to customer that service will be guaranteed a certain level of service.

All routes currently adhere to the existing minimum service levels defined in the service standards.

Where appropriate, clockface headways over 10 minutes provide a legible schedule for customers. However, non-clockface headways should be considered where the amount of service is maximized and the number of new vehicles is minimized. As part of the network review, the existing minimum service levels were reviewed against the existing system. Examples of these standards are shown in **Table 2** for the existing minor arterial and local routes.

Table 2: Minimum Service Levels – Minor Arterial and Locals

Operating Period	Service Period	Maximum Headway*
Weekday Early AM	6:00 am to 7:00 am	30 minutes
Weekday AM Peak	7:00 am to 9:00 am	30 minutes
Weekday Base	9:00 am to 2:00 pm	60 minutes
Weekday PM Peak	2:00 pm to 6:00 pm	30 minutes
Weekday Early Evening	6:00 pm to 9:00 pm	30 minutes
Weekday Late Evening	9:00 pm to 12:00 am	60 minutes
Saturday Day	8:00 am to 9:00 pm	30 minutes
Saturday Evening	6:00 pm to 12:00 am	60 minutes
Sunday / Holidays	9:00 am to 7:00 pm	60 minutes

*Note: maximum headways could be larger in branch portions of the route (i.e. mainline route would operate at half the branch route headway)

2.3 Route Level Productivity

Route productivity is a measurement of the effectiveness of the application of the system's resources against pre-determined criteria. Route performance was assessed using LTC's Fall 2017 ridership data. London Transit collects boarding and alighting data through the use of an APC (automatic passenger counter) system installed on all London Transit buses.

Existing ridership was assessed by time of day and day of the week against the minimum route productivity levels identified in the London Transit Service Standards document. Routes that fall below the minimum productivity level would warrant a further review, including a reduction in service frequency, change in route alignment, and change in service delivery model or elimination of the route.

Route typologies have varied productivity targets relative to the characteristics of the route. For instance, a base arterial route has a higher productivity target than local routes because they generally

attract more ridership due to the direct nature of the service design, with connections to key destinations.

Table 3 illustrates the minimum productivity targets by route typology and service span, which were used to assess whether routes require a change in service levels.

A trigger was also developed to identify potential routes that may warrant a service level improvement. Service level improvements are generally targeted to crowded routes or routes that are highly utilized. A trigger for service level improvements for each route typology and time of day is illustrated in **Table 4**. The triggers are not part of LTC's current Service Standards and, as such, were developed by Dillon for the purpose of determining which routes are highly-utilized. These triggers were defined in discussion with LTC, by adding roughly 25% to the desired productivity standards for each route type.

Table 3: Minimum Productivity Target by Route Type (LTC Standard)

Operating Period	Base Arterial	Express	Industrial	Local	Minor Arterial
Weekday-Early AM	30	30	15	15	20
Weekday-AM Peak	50	30	15	20	25
Weekday-Base	50	30	15	15	25
Weekday-PM Peak	50	30	15	20	25
Weekday-Early Evening	30	30	15	15	20
Weekday-Late Evening	30	30	15	15	20
Saturday-Early AM	30	30	-	15	20
Saturday-Base	30	30	-	15	20
Saturday-Peak	30	30	-	15	20
Saturday-Early Evening	30	30	-	15	20
Saturday-Late Evening	30	30	-	15	20
Sunday-Base AM	20	30	-	15	15
Sunday-Peak	20	30	-	15	15
Sunday-Evening	20	30	-	15	15

Table 4: Productivity Triggers for Service Improvement by Route Type

Operating Period	Base Arterial	Express	Industrial	Local	Minor Arterial
Weekday-Early AM	50	40	20	25	30
Weekday-AM Peak	75	40	25	40	45
Weekday-Base	75	40	25	25	45
Weekday-PM Peak	75	40	25	40	45
Weekday-Early Evening	50	40	20	25	30
Weekday-Late Evening	50	40	20	25	30
Saturday-Early AM	50	40	-	25	30
Saturday-Base	50	40	-	25	30
Saturday-Peak	50	40	-	25	30
Saturday-Early Evening	50	40	-	25	30
Saturday-Late Evening	50	40	-	25	30
Sunday-Base AM	30	40	-	20	25
Sunday-Peak	30	40	-	20	25
Sunday-Evening	30	40	-	20	25

Based on the above productivity thresholds, route typologies are summarized below in a series of graphs. As displayed in **Figure 2** and **Figure 3**, base arterial route productivity is summarized by service span with a red line representing the minimum productivity threshold and a green line representing the trigger for service improvements. Routes 10, 17, and 106 display the productivity levels exceeding the trigger for service improvement threshold on Saturdays, while most routes show that they exceed the minimum trigger on Sundays.

Many of the routes are under performing during the early morning and late evening periods on weekdays and weekends. These under-performing periods were discussed with LTC. Since there is a strong desire to grow ridership, a decision was made not to reduce service levels during these periods. Instead, the service would continue to be monitored and minor operational adjustments made if ridership did not increase.

Figure 4 to **Figure 6** show minor arterial route productivity by service span. This graph shows Route 27 and 29 exceeding the trigger for service improvment by more than two times the set threshold. While Routes 4, 6, 12, 21 and 25 exceed the trigger for service improvement on weekends. Similarly to the base arterials, where routes were underperfoming during select time periods, the decision was made to maintain the existing level of service so as to prevent making off-peak travel unduly unattractive to customers.

As shown in **Figure 7** there are a few express routes that exceed the maximum threshold. Route 91 is over the trigger for service improvement during weekday base, PM peak, and evening period. Moreover,

Route 91 is exceeding the threshold during Saturday peak and early evening periods while Route 90 exceeds the trigger during Saturday peak and Sunday peak. Once more, underperforming routes for select time periods were maintained in order to provide an attractive level of service.

Industrial routes are summarized in **Figure 8.** Route 30 and Route 37 over the productivity trigger for service improvement during weekday AM peak and PM peak, while Route 36 is over during all service spans except during weekday late evening. Note that these thresholds are significantly lower than other route typologies and it is unlikely that they are currently experience capacity issues.

Figure 9 to **Figure 11** illustrates local route productivity by service span. Most routes are within the productivity thresholds, with the exception of Route 31 which is beyond the threshold during the majority of service spans and Routes 11, 15 and 40, which exceed the trigger for service improvement during the majority of weekend service spans.

Community routes were not analyzed due to a lack of ridership data from London Transit.

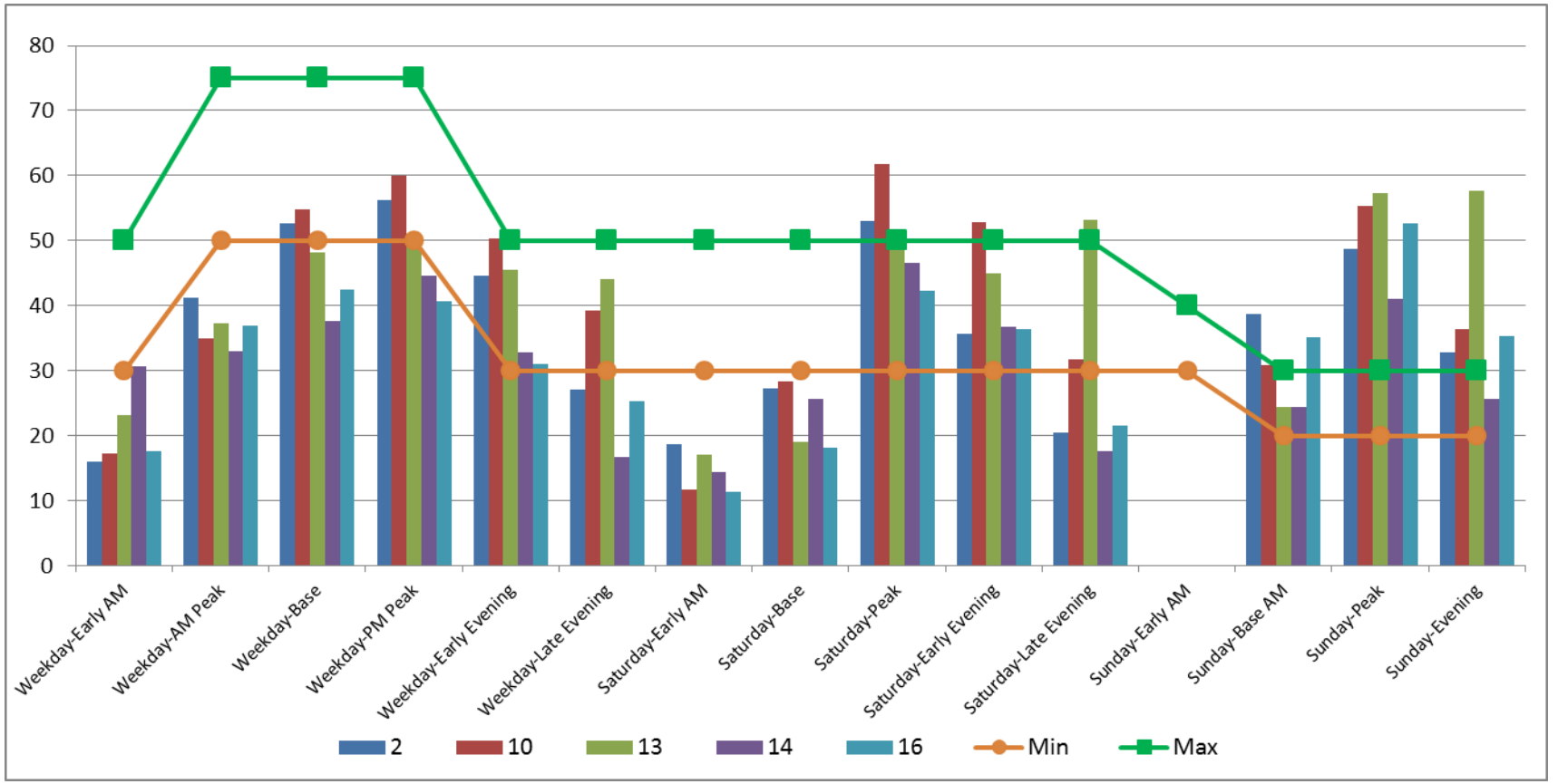


Figure 2: Base Arterial Routes – Productivity (Boardings per Revenue Hour) by Service Period (Fall 2017) – Part I

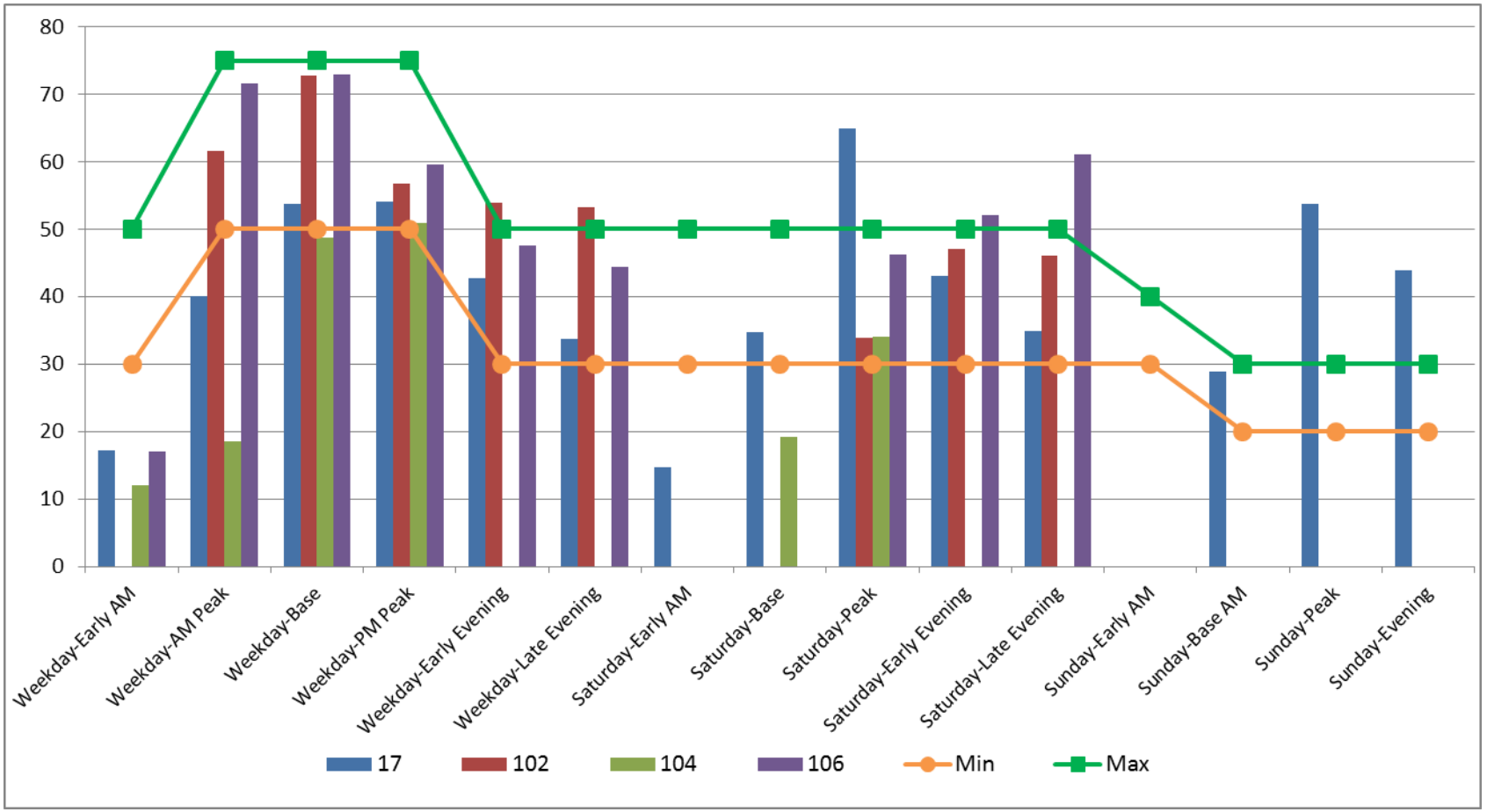


Figure 3: Base Arterial Routes – Productivity (Boardings per Revenue Hour) by Service Period (Fall 2017) – Part II

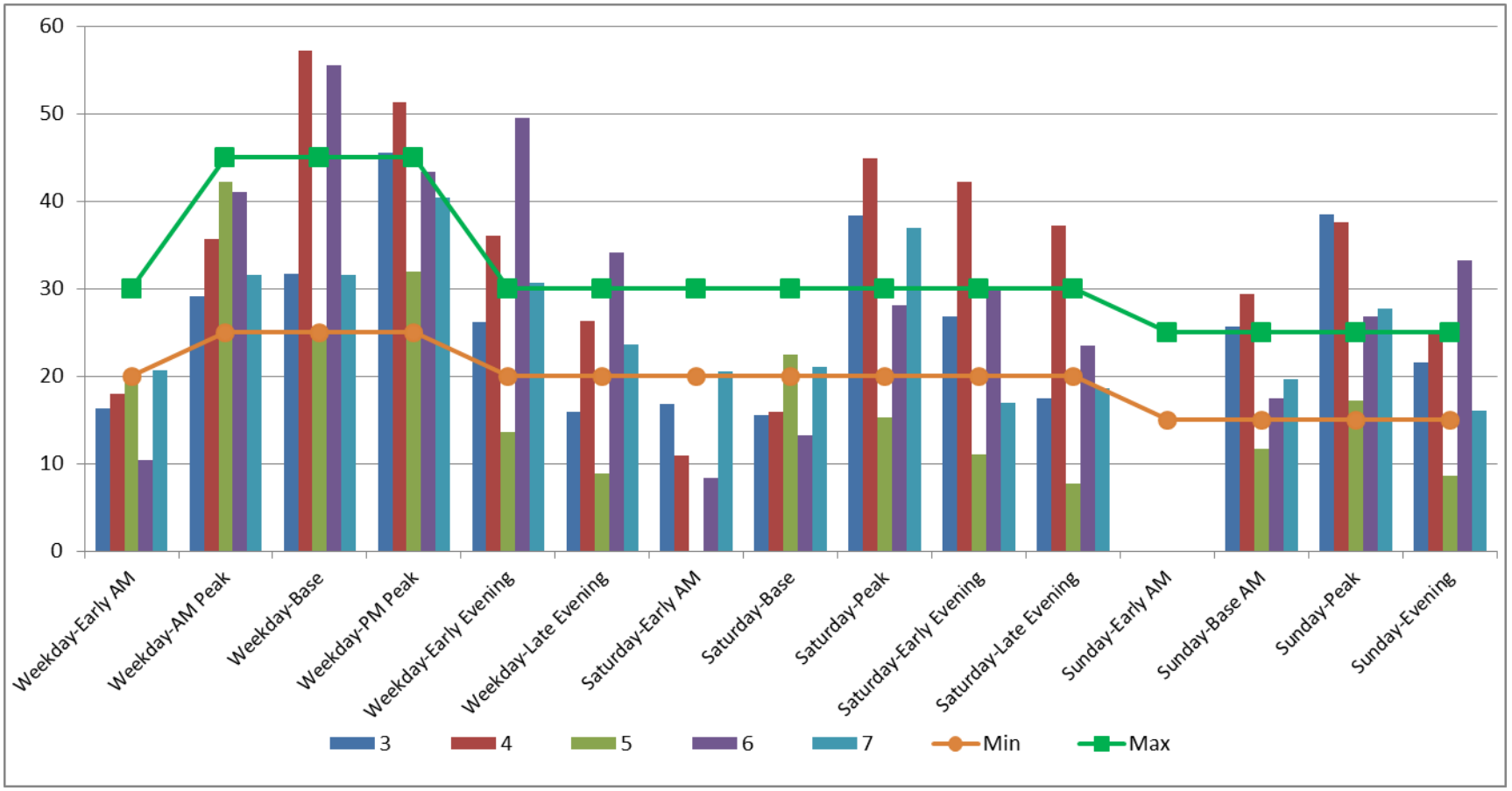


Figure 4: Minor Arterial Routes - Productivity (Boardings per Revenue Hour) by Service Period (Fall 2017) – Part I

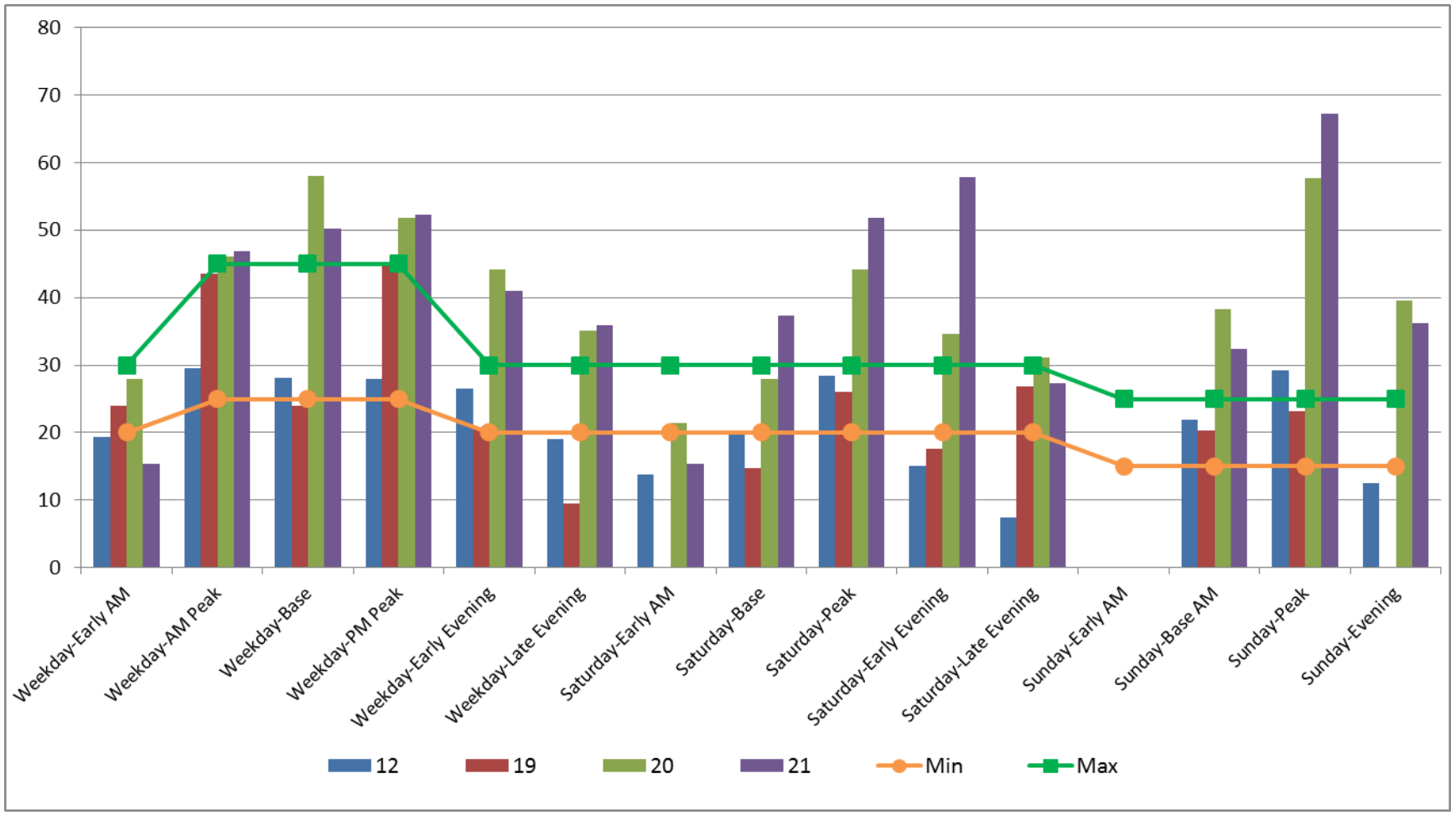


Figure 5: Minor Arterial Routes - Productivity (Boardings per Revenue Hour) by Service Period (Fall 2017) – Part II

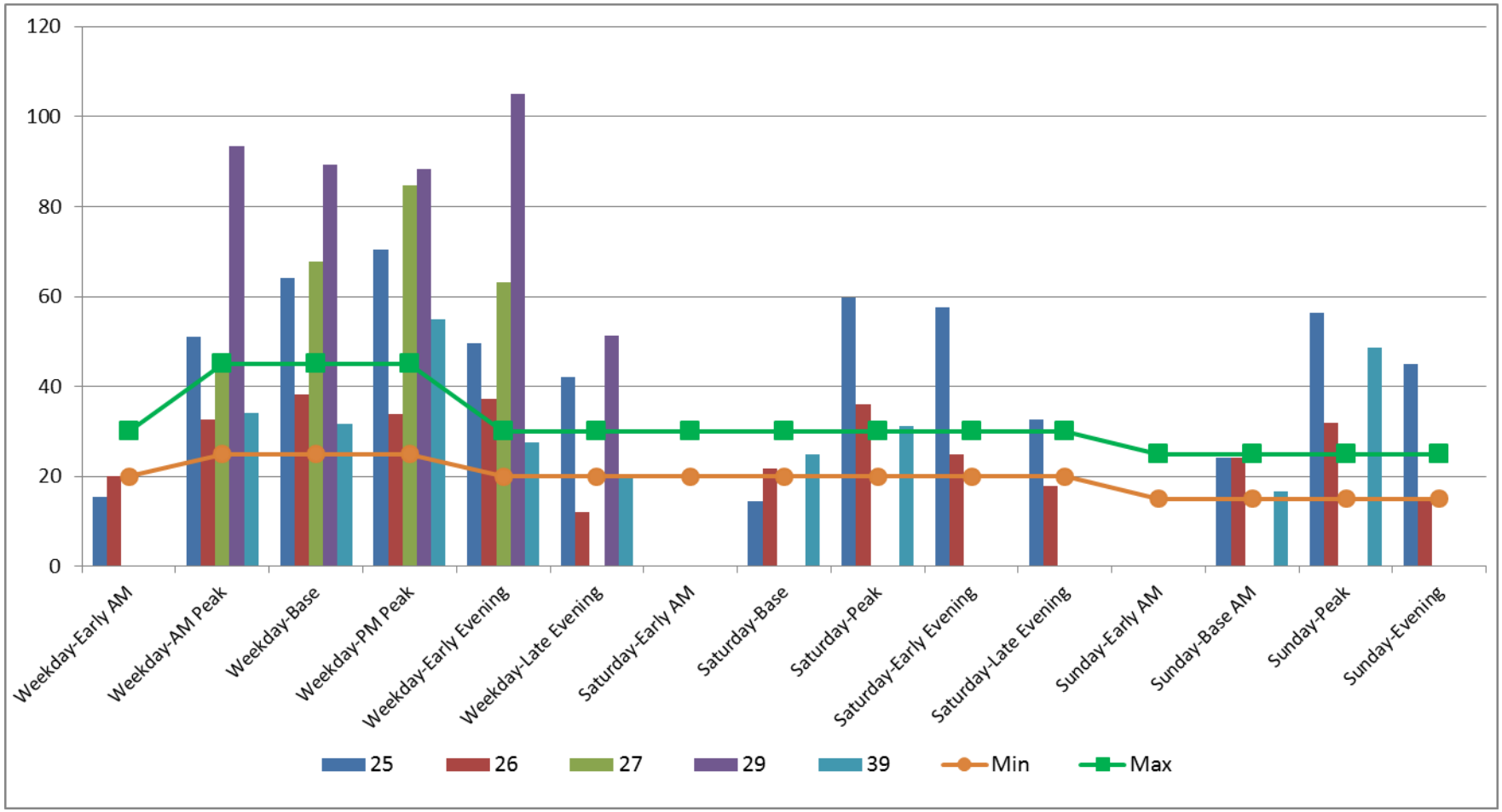


Figure 6: Minor Arterial Routes - Productivity (Boardings per Revenue Hour) by Service Period (Fall 2017) – Part III

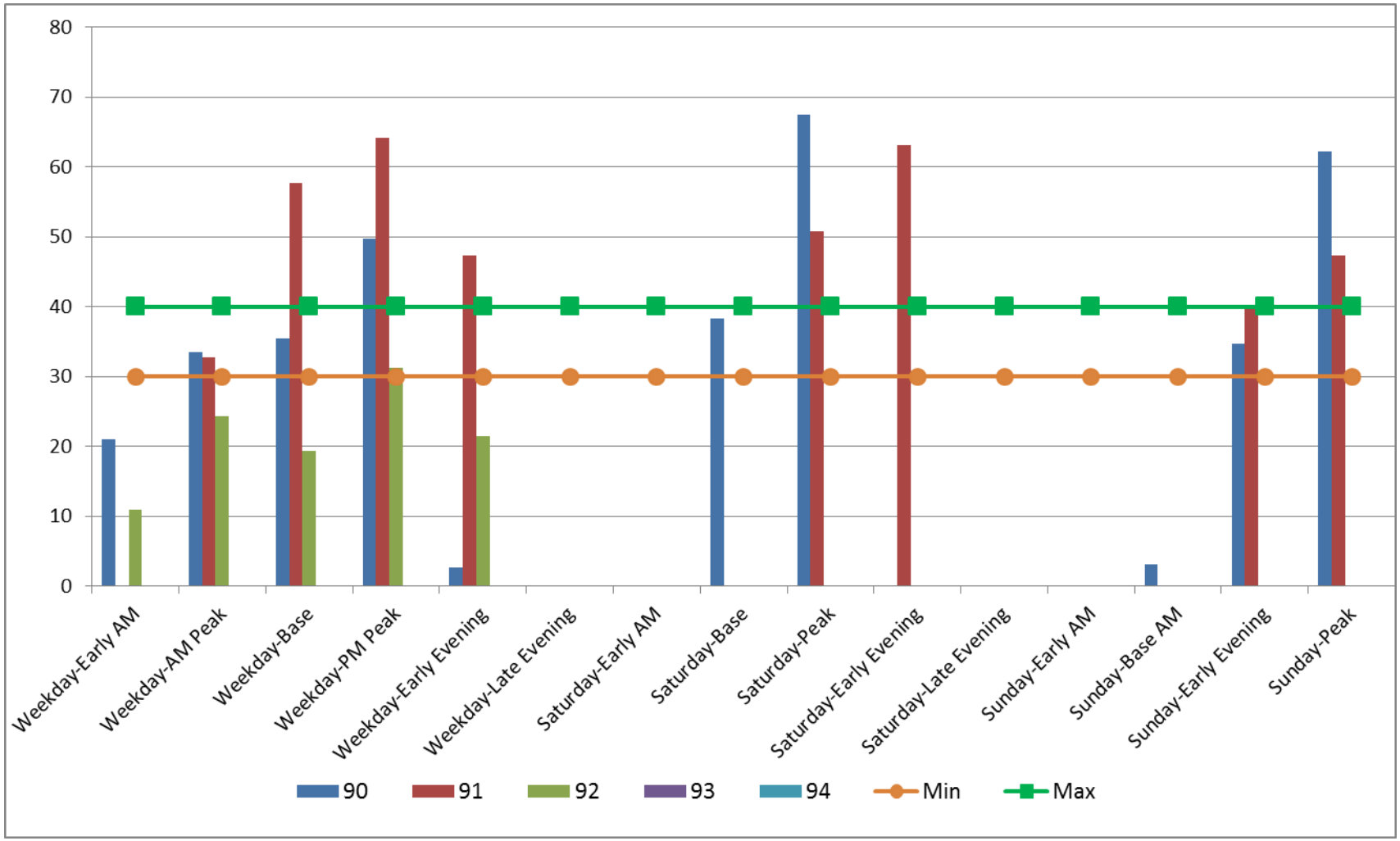


Figure 7: Express Routes – Productivity (Boardings per Revenue Vehicle Hour) by Service Period (Fall 2017)

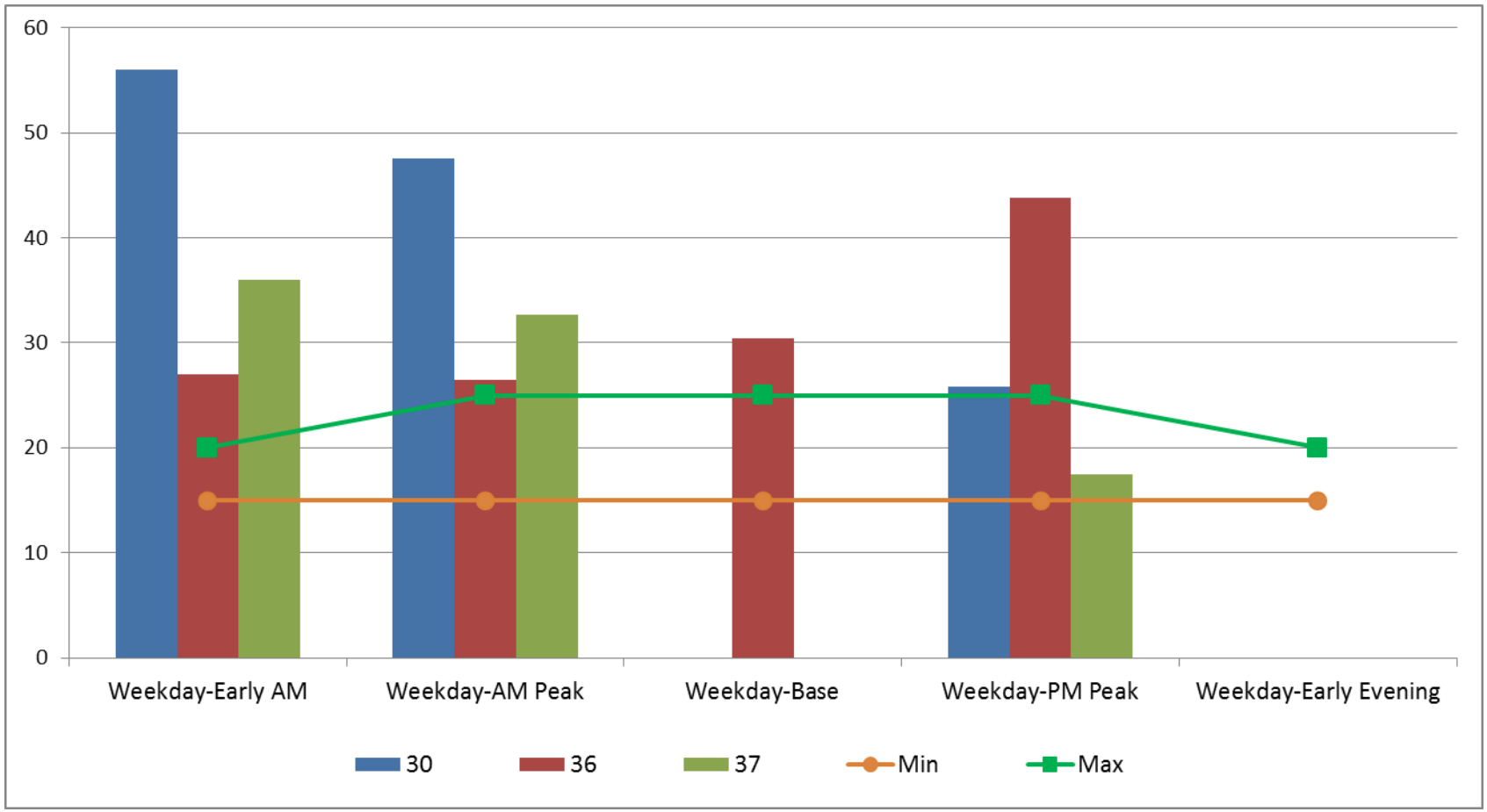


Figure 8: Industrial Routes – Productivity (Boardings per Revenue Vehicle Hour) by Service Period (Fall 2017)

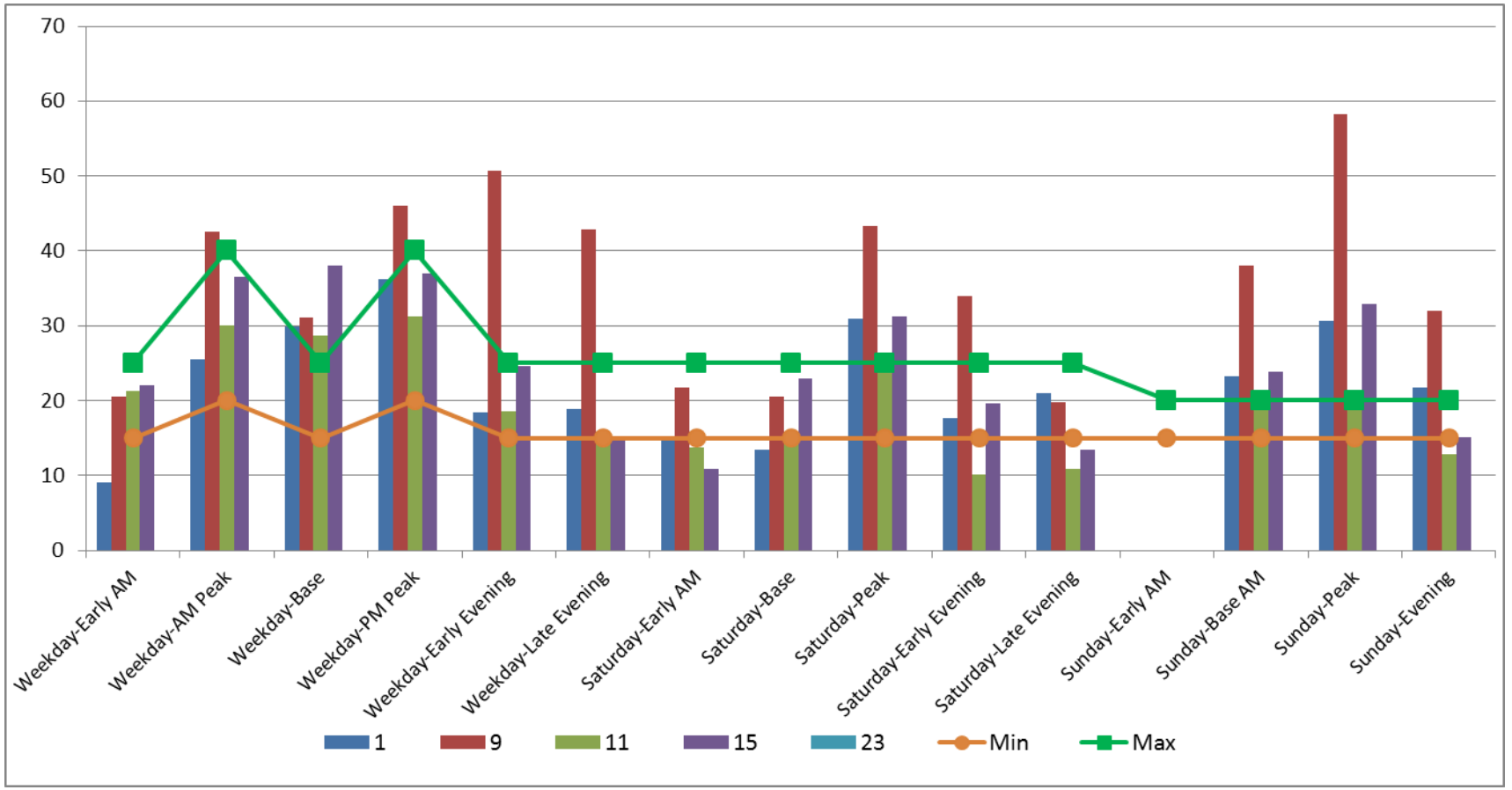


Figure 9: Local Routes - Productivity (Boardings per Revenue Hour) by Service Period (Fall 2017) – Part I

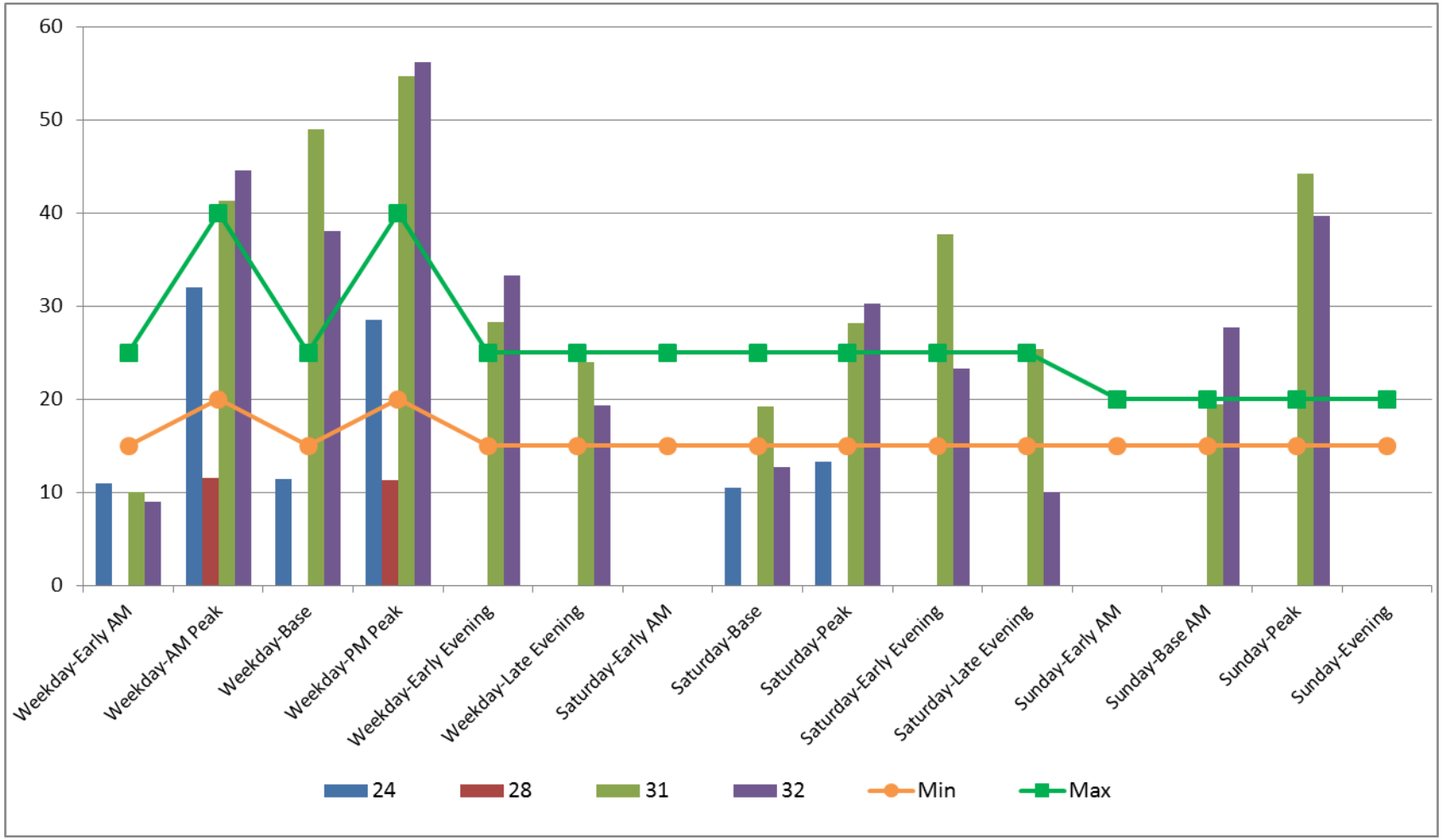


Figure 10: Local Routes - Productivity (Boardings per Revenue Hour) by Service Period (Fall 2017) – Part II

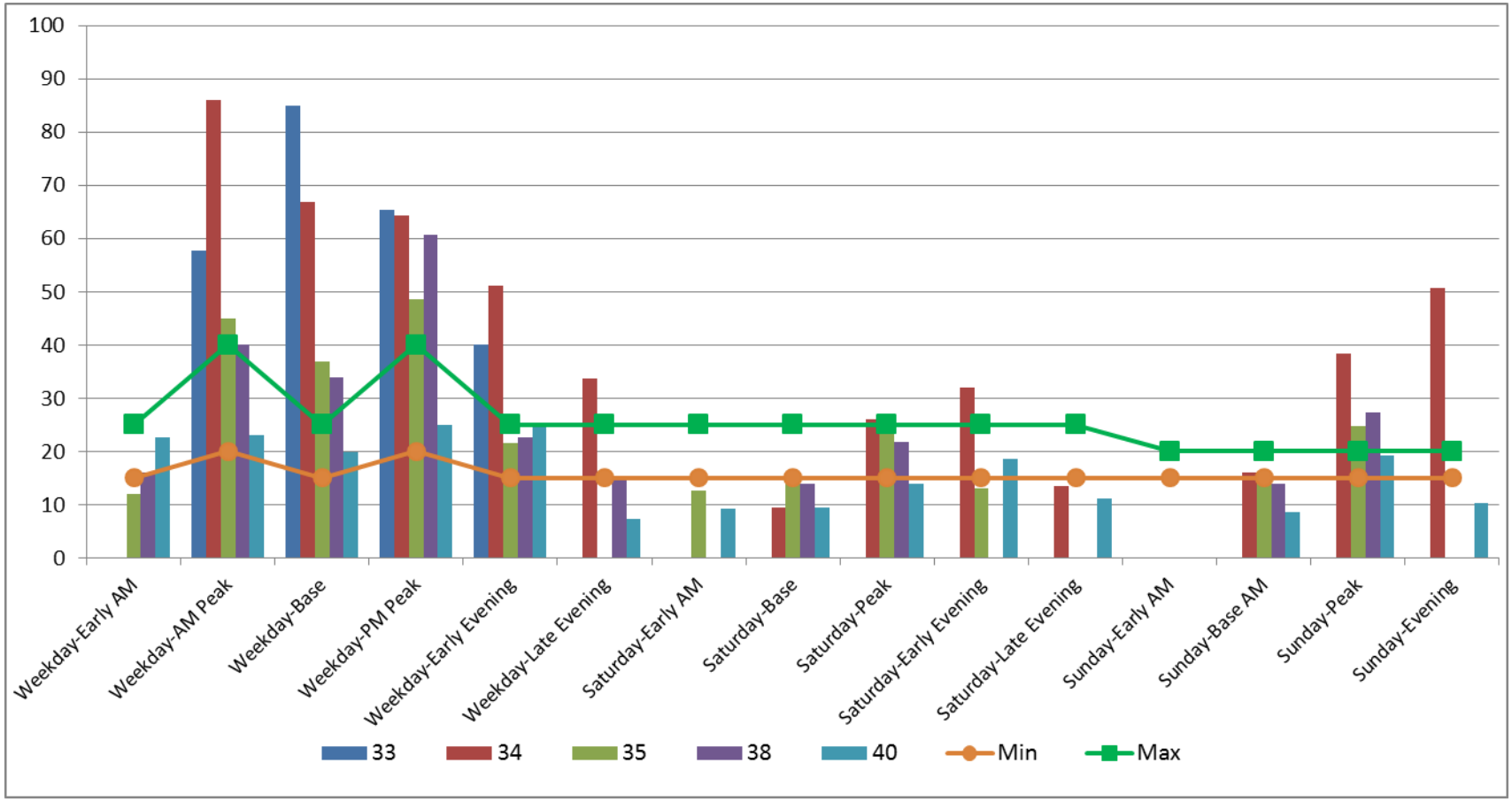


Figure 11: Local Routes - Productivity (Boardings per Revenue Hour) by Service Period (Fall 2017) – Part III

2.4 Stop Activity

To understand boarding and alighting activity on a system-wide and route-by-route basis, a stop activity map was created. Stop activity maps provide a snapshot of activity which can vary based on time period. Using automatic passenger counts (APC) provided by LTC for Fall 2017, stop activity information is displayed in **Figure 12** and was used to identify impacts to existing customers on proposed route realignment options considered as part of the Five-Year Service Plan (see **Section 5.0).**

The majority of passenger activity occurs at key areas of employment, post-secondary institutions and retail areas. These areas include:

- Downtown London (along major corridors such as Richmond Street and Dundas Street);
- Western University (along Sarnia Road, Oxford Street, Western Road, Wharnecliffe Road and Wonderland Road)
- Fanshawe College (including residential areas along Huron Street, Highbury Avenue, Kipps Lane and Mornington Avenue);
- Argyle Mall (Intersection of Dundas Street and Clarke Road);
- Victoria and Parkwood Hospital (Commissioners Road East and Wellington Road);
- Shopping Malls including:
  - White Oaks Mall;
  - Masonville Place;
  - Westmount Shopping Centre; and
  - Pond Mills Centre.
- Community activity centres including:
  - Wortley Village; and
  - Byron (along Commissioners Road West).

There are also a number of areas in the City with low stop activity (please note that these areas already comprise routes with low levels of service):

- Industrial areas on the east and south fringes of the City;
- Route 3A and 3B (Hamilton Road, east of Highbury Avenue South)
- Southwest London, including:
  - Lambeth;
  - Talbot Village;
  - Byron (outskirts of Commissioners Road, west of Boler Road); and
  - Riverside.

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Figure #12: System-wide Stop Activity All-day (Fall 2017)

Daily Weekday Boarding Activity - Fall 2017

- 0 - 50
- 51 - 100
- 101 - 250
- 251 - 1,000
- 1,001 - 2,000
- 2,001 - 4,000
- Municipal Boundary
- RoadNetwork_2018
- Railway
- Waterbody
- Vegetation

0 0.5 1 km

MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: SW
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 18-8035
STATUS: FINAL
DATE: 2019-02-07

2.5 Route Utilization Profiles

Route Utilization Profiles measure variations in the intensity of customer use along the length of a route and give an indication of crowding onboard the vehicle.

To assess how existing service is matched to customer demand patterns, route utilization profiles were developed for each route and time period. To do this, stop-level boarding/alighting data for each scheduled trip in the Fall 2017 signup were combined with LTC's schedule data contained in the General Transit Feed Specification (GTFS) to calculate route utilization between each pair of successive stops on each trip.

A series of maps were generated for all routes on weekdays, Saturdays and Sundays on all service spans (as displayed in **Appendix A)**. These maps were used to inform routing modifications summarized in **Section 5.0** of this report.

The highest concentration of demand occurs along Sarnia Road and all corridors leading to Western University, Oxford Street, Dundas Street and Adelaide Street. The demand data was compared against the existing capacity on each route. This analysis was used to confirm reported crowding issues and determine whether the level of service matched passenger demand.

This analysis was most-useful when exploring routes with high utilization, as it allowed the team to understand how much capacity each service had at different points along the route. In addition, this data was used when investigating potential route modification options by providing greater insight into the functions of each section of route and the destination demand for different parts of the network.

3.0 ISSUES / OPPORTUNITIES IDENTIFIED THROUGH COMMUNITY ENGAGEMENT

Prior to developing the Five-Year Service Plan, Dillon hosted a comprehensive community engagement program. The purpose of this engagement was to gather feedback from the public and operators about LTC's existing services. The results of this program were used to inform the strategic directions of 2020-2024 Five-Year Service Plan.

This initial engagement program featured several opportunities for the public as well as LTC operators to participate. This included:

3.1 Public Open House

A public open house was held at the beginning of the study to gage the public's thoughts on the existing service. Notifications were posted on transit vehicles and the study website prior to the event.

The Public Open House was held at the Central Branch of the London Public Library on September 11, 2018 between 2:00pm and 4:00pm and between 6:00pm and 8:00pm. There were 40 people in attendance that provided valuable feedback on the existing system and potential directions. Input was used to inform the strategic directions as well as more specific route modifications for London Transit.

The information boards used at the public open house can be found in **Appendix B**.

3.2 On-line Survey

An on-line survey for transit customers and non-users was available via the LTC website from September 2nd until September 30th, 2018. The survey asked participants to detail which routes they used frequently and what aspects of those routes worked well, what they perceive the challenges to be, and what could be done to encourage them to use it more frequently. They were also asked to select priorities for improvement in four simple scenarios (i.e. shorter walking distance to bus stops versus more direct routings).

The online survey yielded 165 complete responses that were used to inform the study.

3.3 LTC Operator Survey

Similar to the public survey, LTC operators were asked to complete a survey to gauge their views on the current system and future integration with BRT. Specifically, operators were asked which routes they are most-familiar with and, for those, what works well and what challenges they face. Additionally, operators were asked what overall key concepts (frequency at different periods, directness or new coverage areas) should be prioritized in the Five-Year Service Plan. Most questions were multiple choice, with the opportunity to provide additional written information. This survey yielded 40 complete responses.

3.4 Key Issues and Opportunities

Comments and suggestions about the existing service were collected through each of these community engagement activities and the key themes from this process are detailed below. As the engagement was focused on the 2020-2024 Five-Year Service Plan and comments relating to other issues have been excluded. In general, the public and operators have a positive view of LTC's services, with many responses indicating that the current system gets them where they need to go. However, several issues and opportunities for improvement were also identified by many participants.

3.4.1 Frequency

Only 17% of participants responded that services currently operate frequently-enough and 14% of participant's specifically-requested more frequent service on weekdays. Additionally, 20% of operators felt that more service should be provided at peak times and 10% felt the same about weekday evening service. Sunday frequencies also emerged as an issue from public participants, with 11% of people asking for more frequent service on that day.

3.4.2 Connectivity and Legibility

Twenty-one percent (21%) of operators felt that services should be more direct. At the face-to-face sessions, passengers also commented that they enjoyed the direct connections provided by express routes.

3.4.3 Coverage

Thirty-one percent (31%) of operators requested that more services should be extended to new areas. From a customer's perspective, service to new areas did not come up as a high priority. This may be due to the fact that the majority of participants were existing transit customers that already receive service.

3.4.4 Operating Hours

Several requests were made to extend service hours, with later service on weeknights being the most prominent from members of the public. This was not a significant request relative to other requests for service.

4.0 STRATEGIC DIRECTIONS

The recommended service plan was developed assuming no Bus Rapid Transit network would be in place over the next five years. The timing for the initial stages of BRT will occur after 2024. Therefore, the network improvements will help build ridership with a future BRT service in mind. The focus of the Five-Year Service Plan was to address immediate concerns identified by customers, transit staff and operators and identify opportunities to enhance service, grow ridership and get ready for BRT.

The review of existing services and consultation with the public revealed a number of key issues and opportunities to be addressed. These were translated into five strategic directions which formed the basis of a number of recommendations included below:

4.1 Enhance Overall Levels of Service

Moving towards the transit mode share targets identified in the London Transportation Master Plan will require continued investment in service. There are three key factors that drive ridership growth: frequency, reliability and travel time. This strategic direction will promote the continued improvements to service levels as a method of making the service more attractive to London residents and therefore increasing ridership. This will also help build ridership to support the investment in Bus Rapid Transit services. Service improvements should be targeted to high performing routes, benefiting existing customers and providing more service on routes that connect major origins and destinations. Existing ridership was analysed to identify routes with the greatest demand and potential for ridership growth through enhanced levels of service.

4.2 Explore Alternative Service Delivery Models in New Communities

Alternative Service Delivery (ASD) models are another way municipalities and transportation operators can provide public transportation service. ASDs are typically characterized by the use of mobile app technology and the smaller vehicles that provide demand-responsive service in lower demand neighbourhoods, employment areas or off-peak periods of the day.

A key strategic direction in this plan is to begin to explore the use of Alternative Service Delivery models in areas of the City that are currently unserved due to low ridership potential. These include large low-density industrial areas and business parks. Existing routes with poor productivity was also explored as a potential to convert from a traditional fixed-route to an on-demand ASD area. The criteria to introduce an ASD model in a new area or as a replacement to an existing fixed-route service is noted below:

- The relative cost of the service should not exceed the cost of operating a conventional fixed-route in the same area;
- The removal of fixed-route service in a potential ASD area would not result in a disconnect between two fixed conventional transit services; and
- The productivity of the existing fixed-route that the ASD model would replace must be less than 50% of the minimum productivity target for the majority of consecutive periods.

4.3 Improve Direct Connections

London Transit operates a modified grid network, with key transfer opportunities in the downtown and other major nodes. Most Base Arterial Routes are designed to provide direct east-west or north-south service, reducing overall travel time for customers. A key strategic direction will continue to expand on the grid network, identifying opportunities to provide more direct routes, connected to key destinations. Providing a direct and frequent level of service will help improve ridership, supporting the future implementation of BRT corridors in London. Operators and public participants supported more direct services.

4.4 Build on the Express Route Network

London Transit operates three successful express routes and plan to introduce two more in the Fall of 2019. While some express routes (e.g. Richmond/Wellington and Dundas) are a pre-curser to BRT, others provide a more direct and rapid travel option on key corridors, connecting major activity nodes and transfer points.

A key strategic direction for this Five-Year Service Plan was to continue to identify opportunities to expand the express route network. This will help build ridership through improved service levels and enhanced connectivity to other routes.

4.5 Eliminate 60 Minute Headways

Hourly service is not considered an attractive level of service and will do little to attract new customers. This currently occurs on a few routes during the late evening, early morning and/or weekend periods. A key strategic direction in this plan will be to continue to improve the frequency of routes that operate every 60 minutes (during certain periods). This will be a policy-based decision, which may require an update to the Service Standards document (targeting 30 minute headway or better or the implementation of an Alternative Service Delivery model where the demand does not warrant a service increase).

4.6 Minimize Impacts on Existing Passengers

Changes to route alignments can be difficult and have an impact on existing passengers. Many passengers have established travel routines using the existing system which can be disrupted with even a small change in the service. This strategic direction is about minimizing impacts on existing customers when modifications occur. This involves weighing the positive impacts of the proposed modification against any customers that may not view the change favourably. Each route modification proposed was based on a review of existing ridership patterns and a public consultation process.

5.0 RECOMMENDED 2024 NETWORK

The following section describes the recommended 2024 service strategy to be implemented over a five-year period. The service plan begins with the proposed Fall 2019 service network as a base, and builds on this with a focus on ridership growth and meeting the Strategic Directions presented in **Section 4.0**.

This includes modification to existing routes, introduction of a new express route, Alternative Service Delivery strategies in low-demand areas, and frequency improvements to build ridership (in line with London Transit's Ridership Growth Strategy). It should be noted that the recommended route network is based on the proposed 2019 transit network plan, which at the time of writing this report, was still under consideration by the London Transit Commission and may be subject to change.

5.1 Modifications to Route Structure

Modifications to the route structure over the next five years are anticipated to be smaller in scale compared to the more significant restricting that was recommended in the 2015-2019 Transit Master Plan. The focus over the past five years was to right-size the network and ensure resources where allocated where needed. There was also a significant push to increase service levels, improve connectivity to key destinations and expand on the express network. The 2020-2024 plan builds on the work completed in the previous plan, identifying further opportunities to grow ridership through service level improvements and minor route adjustments to improve connectivity. This includes the introduction of a new express corridor as well as exploration of Alternative Service Delivery models to provide service in low-demand areas.

A summary of the route modifications are illustrated in **Figure 13.** A more detailed description is noted below.

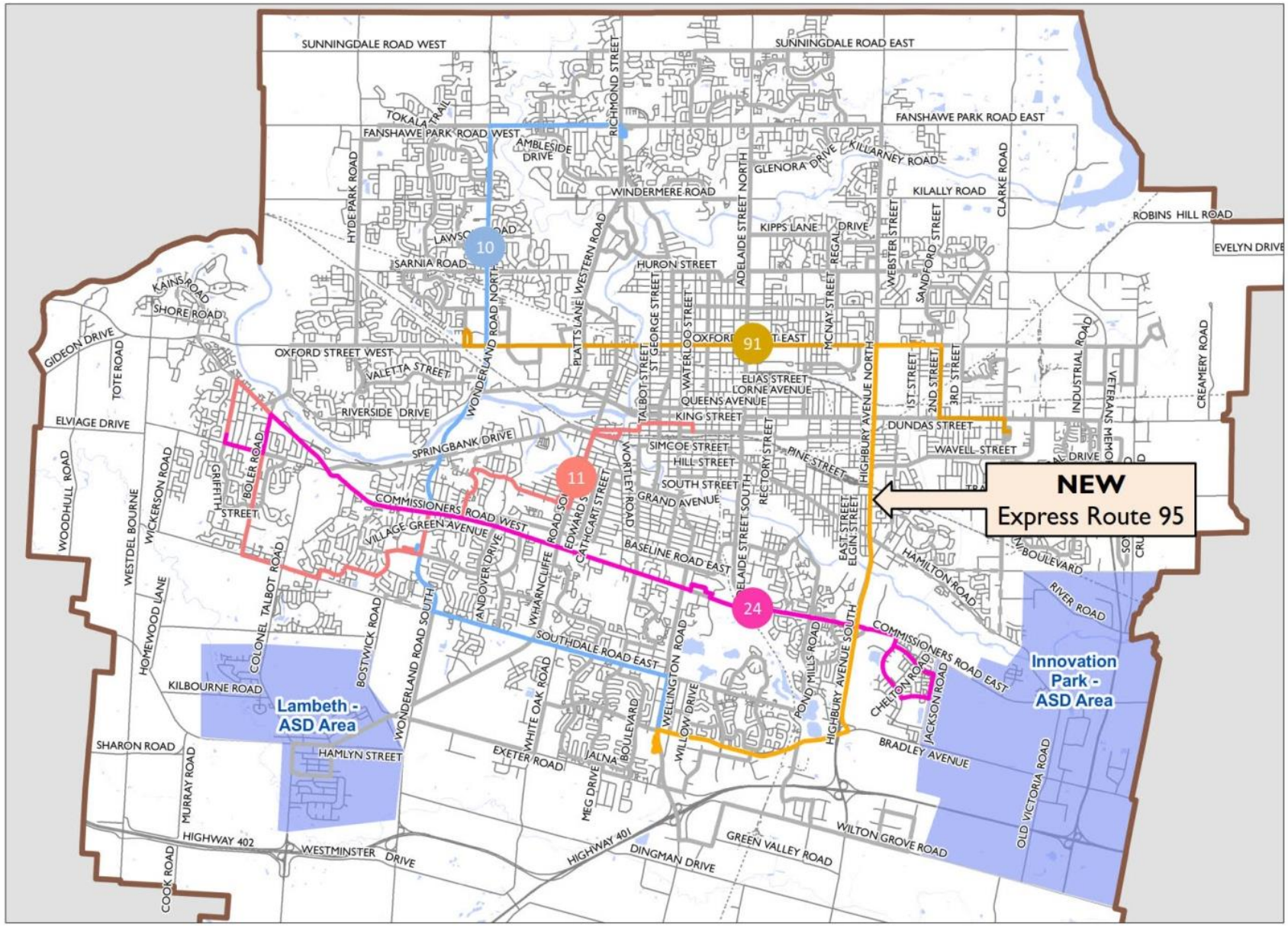


Figure 13: Proposed Alignment Modifications and New Services

5.1.1 Byron and Talbot Village

The LTC currently operates a variety of conventional fixed route services in the Byron and Talbot Village areas in southwest London.

Description of Service / Issues

LTC operates two major routes in Byron. Route 5, a crosstown minor arterial route operates along Springbank Drive connecting Byron to Downtown London. Route 17, a major arterial route with two branches, connects the Oxford Corridor to the new community of Riverbend, Byron Village and Riverside / Oakridge across from the Thames River.

While the current routing provides good connections to the downtown and the Oxford corridor including Fanshawe College, there is a clear disconnect between Byron to destinations to the east, south of the downtown. This includes access to a large-format retail centre in Talbot Village, Westmount Mall and a number of medical facilities on Wellington Road, such as Victoria and Parkwood Hospitals. The challenge was the Commissioners Road corridor at Springbank Drive (colloquially known as "Snake Hill") has posed an operational issue to London Transit because of unsafe driving conditions during inclement winter weather conditions (due primarily to the grade). This has prevented London Transit from introducing an east-west major arterial route on Commissioners Road from Byron to Wellington Road. The City of London has plans to reconstruct "Snake Hill", which will eliminate the operational issue for London Transit buses. Once this is complete, there is an opportunity to straighten Route 24 and provide a direct east-west service.

If Route 24 were modified to cover the full Commissioners Road corridor (to Byron Village), Route 11 could be extended south to provide service to Westmount Mall and Talbot Village.

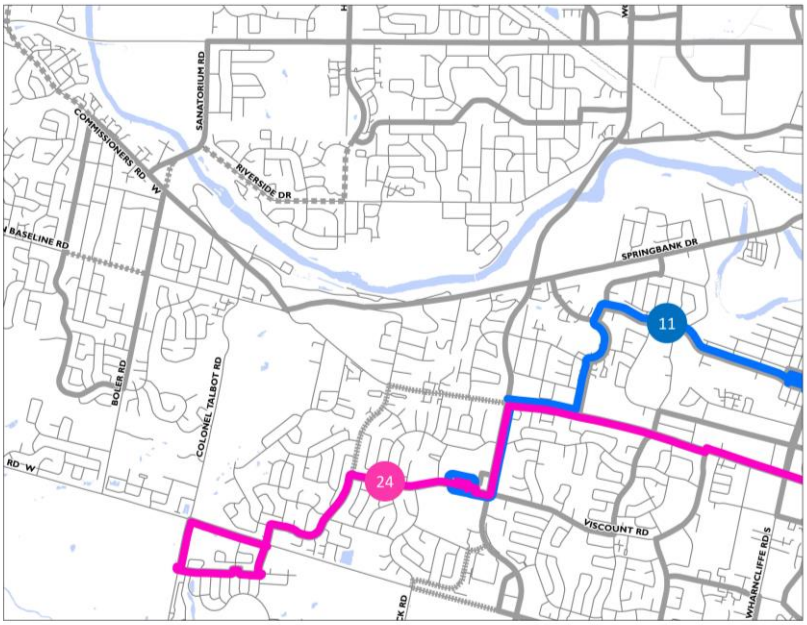
There are also sections of Southdale Road and Boler Road which are currently underserviced. A short extension of Route 11 to Byron Village would improve service coverage in this area and connect Byron residents to shopping opportunities in Westmount.

Recommendation

As displayed in **Figure 14**, the proposed changes to Byron and Talbot Village are the following:

1. Re-structure Route 11 and Route 24 to:
    a. Better connect residents in Byron to the Commissioners Road corridor (including Victoria and Parkwood Hospital) – subject to reconstruction timeline of Snake Hill;
    b. Better connect residents between Byron and Talbot Village (primarily retail opportunities);
    c. Expand service to new areas – including areas on Southdale Road West and Boler Road in Talbot Village; and
    d. Simplify the network.

Existing (2019)



Proposed

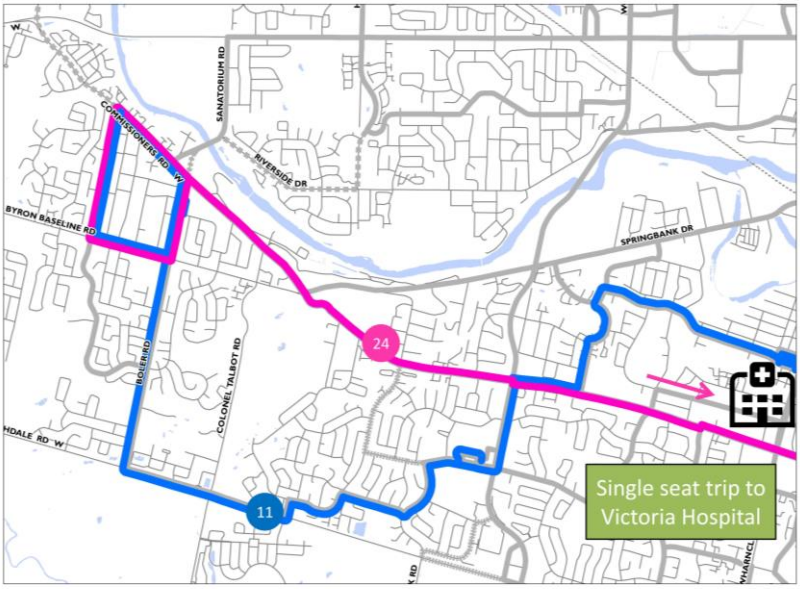


Figure 14: Proposed Route Changes in Byron and Talbot Village

Service Hours and Vehicle Requirements

- Annual Service Hour Requirements: +13,960
    - Route 11: +11,600 (including one 60 minute frequency improvement)
    - Route 24: +2,360
- New Bus Purchase Requirements: +4
    - Route 11: +3
    - Route 24: +1

Impacts

The extension of Route 11 to Byron along Southdale Road West and Boler Road would result in the removal of service from a part of Route 24 (Tillman Road, Raleigh Boulevard and Colonel Talbot Road). This modification will have minor impacts to existing customers as 16 people board Route 24 in this area on a daily basis. Overall, the majority of these passengers would still be within a five minute walk of a bus stop on Southdale Road, with only 6 passengers outside of this walking distance criteria. The modification allows Route 11 to maintain a more direct service for passengers on Southdale Road and services the major activity centre in both directions at the intersection of Southdale Road West and Colonel Talbot Road.

The expansion of Route 11 into greater areas of Talbot Village will provide new access to approximately 350 residential homes within a 500 metre walking distance.

By swapping the location of Route 11 and Route 24 west of Wonderland Road portions in Talbot Village previously destined for the Commissioners corridor would have to transfer to Route 11 at Commissioners Road West and Wonderland Road South. Conversely, customers in the area will now have a direct downtown connection.

5.1.2 Route 95 Highbury Express

Highbury Avenue is a major north-south mixed highway and arterial roadway in east London.

Description of Service / Issues

LTC currently operates base arterial Route 14 on Highbury Avenue which connects White Oaks Mall to the Carling neighbourhood northwest of Oxford Street. The route currently services residential streets in the Westminster community bypassing the majority of highway portion of Highbury Avenue. The route currently has a round trip travel time of 100 minutes. This means that for passengers travelling between White Oaks Mall and Carling, they are required to be on the bus for up to 45 minutes.

Patrons destined for Fanshawe College are also required to transfer at Oxford Street West to Route 4, 17, 20 or 104. This represents approximately half of passengers heading northbound on Highbury Avenue.

This flow of existing ridership is better illustrated by the route utilization profiles detailed in **Section 2.4** and **Appendix A**, as well as

Figure 15 below (Red – high passenger load, Green – low passenger load). This shows a large drop in ridership at Oxford Street, with a number of passengers transferring to access Fanshawe College.

The opportunity to introduce an express route between White Oaks Mall and Fanshawe College was explored to reduce travel times between these two destinations and eliminate the need to transfer for customers travelling to/from Fanshawe College.

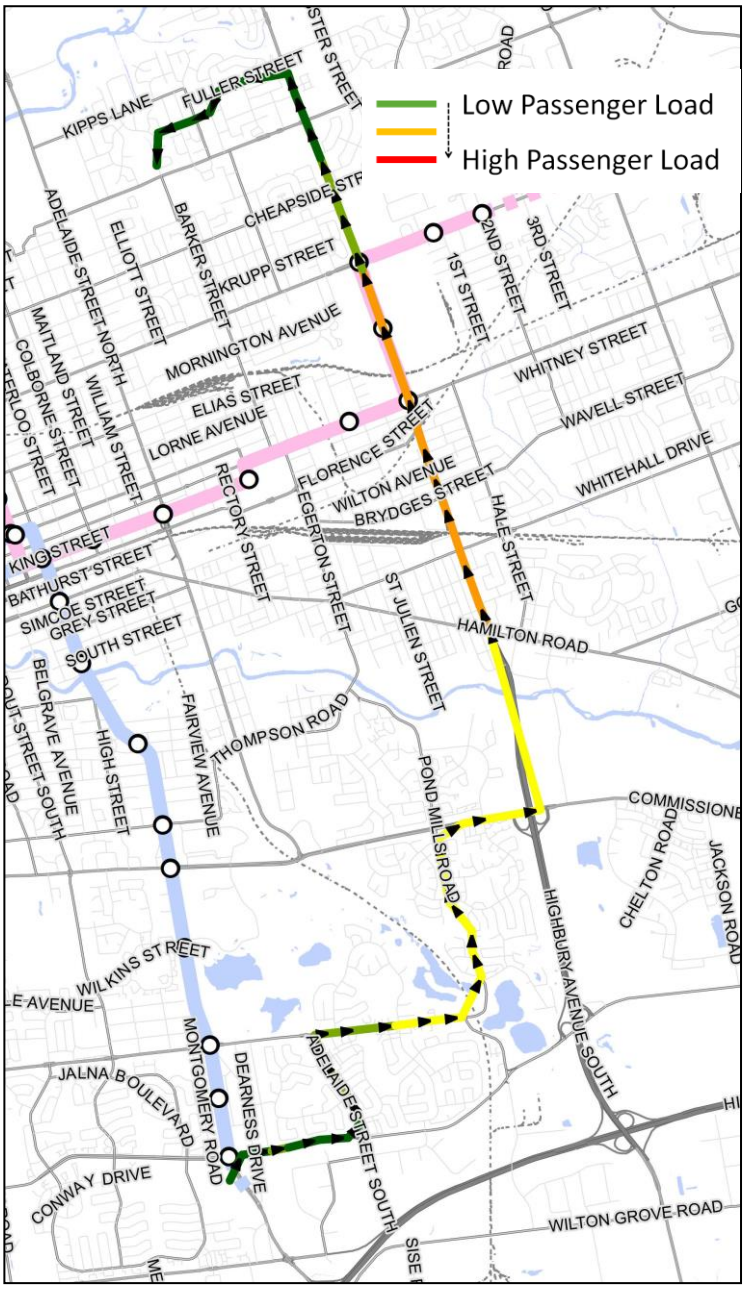


Figure 15: Route Utilization Profile of Route 14 Northbound – Weekday AM-Peak

Recommendation

To take advantage of the rapid nature of Highbury Avenue and provide a faster more connected service, a new Express Route 95 is proposed. Route 95, as displayed in **Figure 16**, is a limited stop service designed to connect two major destinations including White Oaks Mall to the south and Fanshawe College to the north and reduce travel time for customers. The service is expected to reduce travel times from White Oaks Mall to Fanshawe College by 60% in the northbound direction and 42% in the southbound direction compared to Route 14. The total round trip time is expected to be around 50 to 60 minutes in duration. The service would provide improved coverage to Bradley Avenue, with a new stop recommended at Millbank Drive, which will provide access to both the residential area to the north and the industrial area to the south.

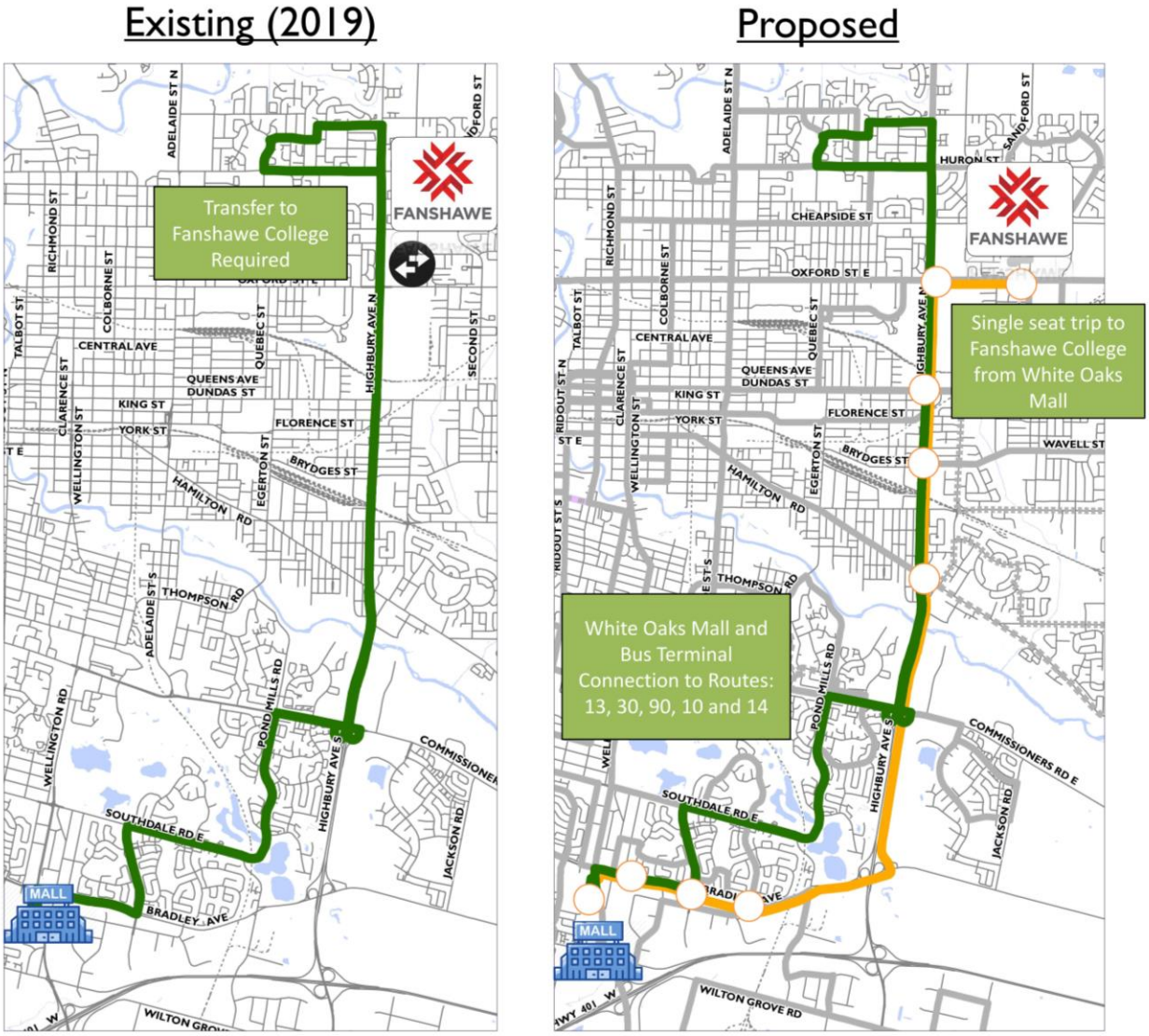


Figure 16: Proposed Route 95 Highbury Express

Service Hours and Vehicle Requirements

- Annual Service Hour Requirements: +8,900
- New Bus Purchase Requirements: +3

Impacts

There are no anticipated negative impacts to the introduction of this route, as Route 14 would continue to be in operation, providing access to the Carling and Pond Mills neighbourhoods.

5.1.3 Wonderland Road and Sarnia Road (Route 10)

Route 10 is a major arterial route that provides a perimeter service in west London, from White Oaks Mall in the south and Masonville Place to the north.

Description of Service / Issues

Wonderland Road is a major north-south arterial corridor that does not have a continuous service between Sarnia Road and Fanshawe Park Road. Route 31 and Route 9 covers portions of this corridor, but they do not provide a direct north-south connection. The existing Route 10 uses Sarnia Road to provide a direct service to Western University, with limited access to Masonville Place.

Providing a full service on Wonderland Road would help complete the grid network, providing a north-south route in the west end of London between Fanshawe Park Road and Southdale Road.

If Route 10 was modified to service Wonderland Road north of Sarnia Road, the service would be removed from Sarnia Road, which provide direct connections to Western University. This would reduce the capacity of service on a highly utilized corridor.

As part of the 2019 service plan, Route 29 (which operates on this section of Sarnia Road) is proposed to be merged with Route 27, to create a more direct east-west route from east London to west London. This will slightly reduce the level of service on the new combined route during some operating periods.

As a result of the proposed change in Route 10, as well as the proposed merger of Route 27, 29 and 32, there may be a need to add additional service on the current Route 29 alignment.

Recommendation

To address this missing link on Wonderland Road, the following modifications were made to Route 10 and Route 29 (as shown in **Figure 17):**

1. Modify Route 10 to Masonville Place via Wonderland Road North and Fanshawe Park Road West:
    a. Simplify the network
    b. Expand to new areas
    c. Increase number of connections to Masonville Place
2. Re-introduce Route 29 as a short-turn of Route 27 (Fall and Winter only) subject to approval of the proposed Route 27/29 interline as part of the 2019 service plan (to be presented in March 2019):

a. Enhance overall levels of service
b. Match frequency of Route 29 short-turn with Route 10
    i. Weekday peaks and early evening – 20 minute headway
    ii. Weekday early AM, base, late evening – 30 minute headway

Service Hours and Vehicle Requirements

Route 10

- Annual Service Hour Requirements: +2,130 (plus one 60 minute frequency change)
- New Bus Purchase Requirements: 0

Route 29 (Fall-Winter Only)

- Annual Service Hour Requirements: +4,750
- New Bus Purchase Requirements: +3

Impacts

Modifying Route 10 will have a positive impact to customers destined to Masonville Place, as the service will operate there during all periods. It will also improve coverage for residents that live near the Wonderland Road corridor north of Sarnia Road.

For customers that live south of Oxford Street and are destined to Western University, the modification of Route 10 will require an extra transfer onto either Route 27 or Route 29. Since the combined headway between Route 27 and 29 will be fairly good, the transfer time is expected to be minimal.

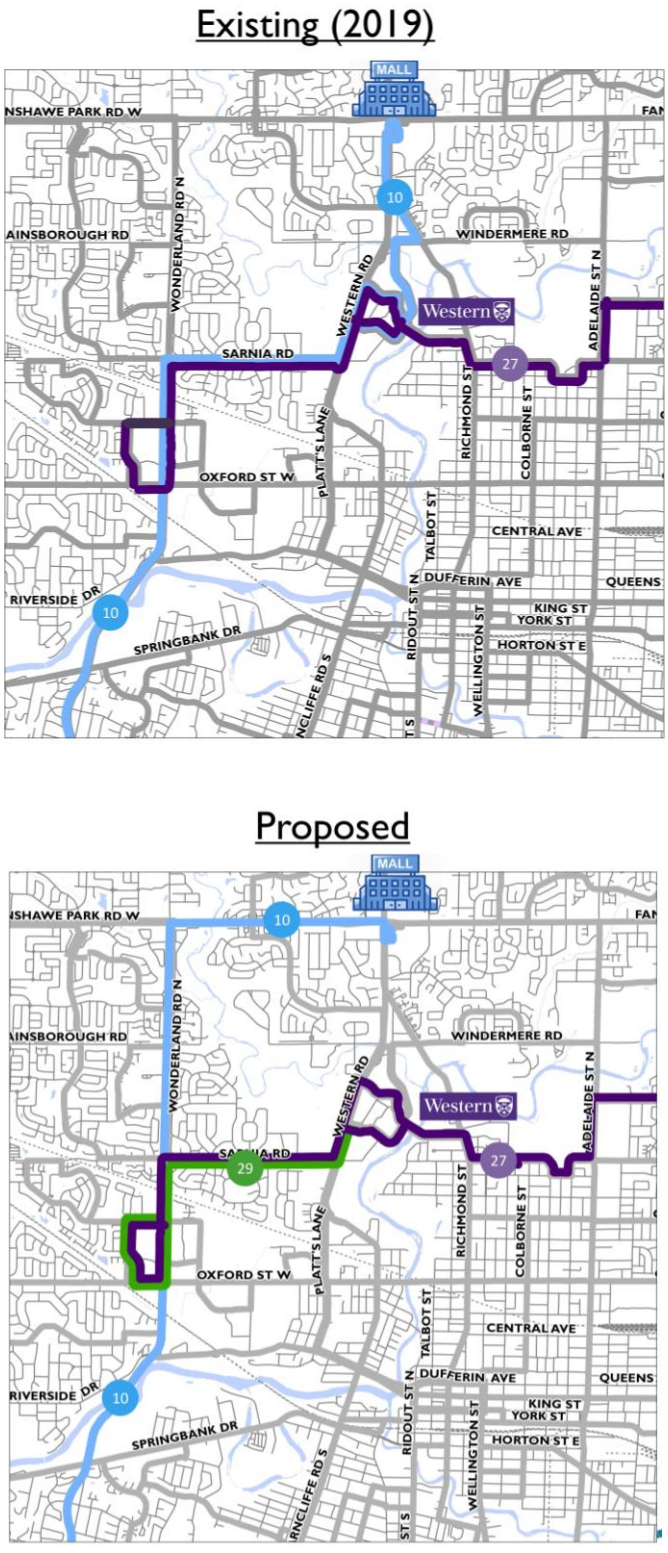


Figure 17: Proposed Modifications to Route 10

5.1.4 Route 91 Extension

Route 91 is an existing express route which provides fast and reliable transportation on the Oxford Street corridor between Wonderland Road and Fanshawe College.

Description of Service / Issues

While the existing service is well used, there is a missing link between Fanshawe College and Argyle Mall that would benefit from an express connection. While this link is currently service by Route 17, the route travels through a residential neighbourhood, which decreases the directness of the route and adds travel time to customers.

Extending Route 91 to Argyle Mall would complete this connection in a more direct route and provide service to Second Street (which currently does not have a bus route).

Recommendation

The following recommendations to Route 91 are illustrated in **Figure 18** and summarized in the list below:

1. Extend Route 91 to Argyle Mall along Second Street and Dundas Street
    a. Build on the existing express network by extending an existing express route
    b. Enhance overall level of service
    c. Improve connectivity be connecting two major destinations
    d. Improve coverage by adding a stop on Second Street (where no transit service is currently in place)

Service Hours and Vehicle Requirements

- Annual Service Hour Requirements: +4,550
- New Bus Purchase Requirements: +2

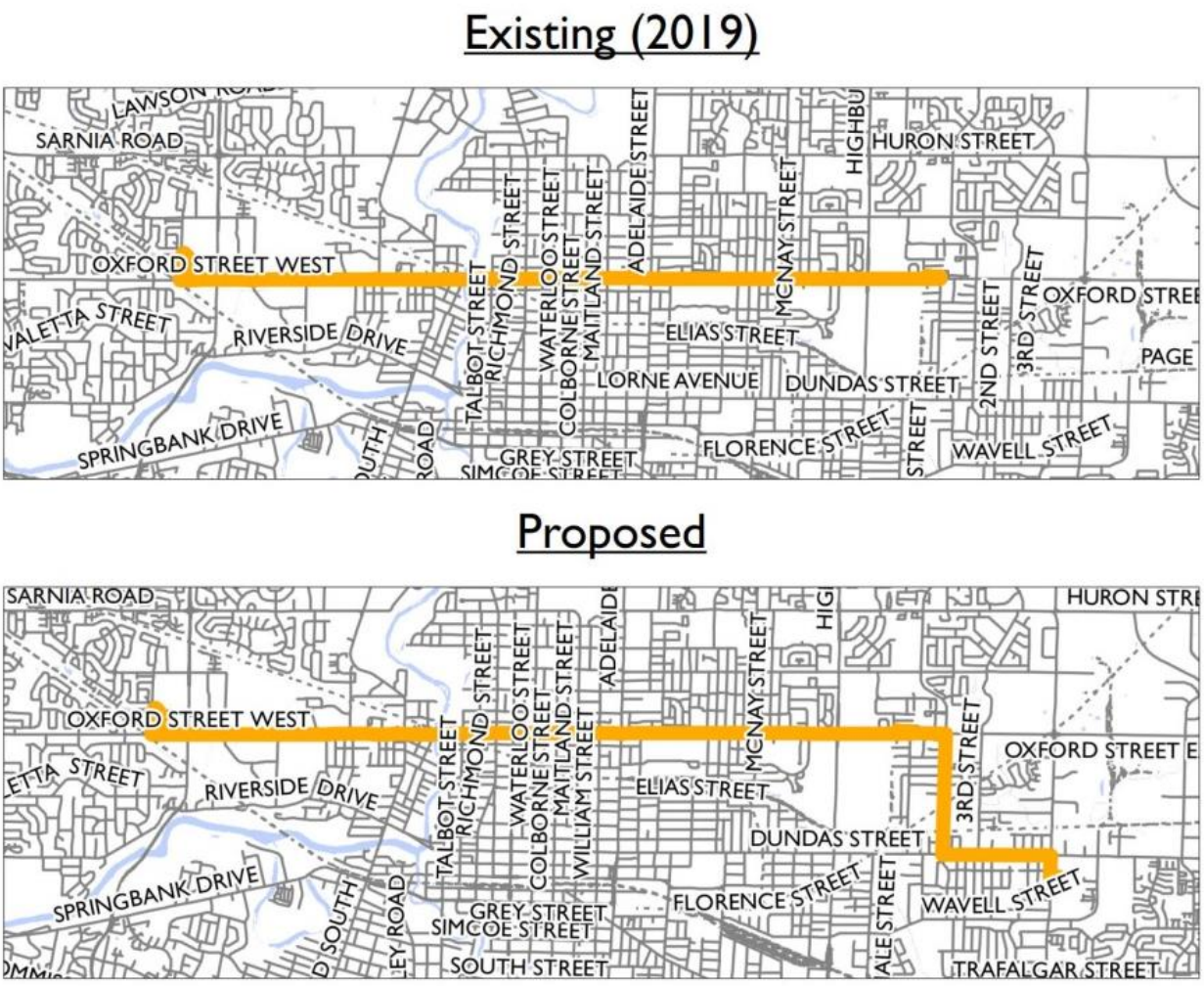


Figure 18: Proposed Modifications to Route 91

5.2 Sixty (60) Minute Frequency Improvements

The draft London Transit Ridership Growth Strategy identifies a strategy to eliminate all routes with a 60 minute headway. This direction was also reflected as a key strategic priority in this plan.

The extent of improvements by route and period of service is shown in **Table 5.** Note that the majority of improvements made will affect the late evening and early morning periods. The service hour implications of this change are noted in **Section 7.0**.

Table 5: Proposed Sixty (60) Minute Frequency Improvements

Route	Operating Period	Existing Headway	Proposed Headway
Route 5	Weekday-Early Evening	60	30
	Weekday-Late Evening	60	30
	Saturday-Early AM	60	30
	Saturday-Base	60	30
	Saturday-Early Evening	60	30
	Saturday-Late Evening	60	30
	Sunday-Base AM	60	30
	Sunday-Peak	60	30
	Sunday-Evening	60	30
Route 7 / 11	Saturday-Early AM	60	30
Route 9	Saturday-Early AM	60	30
	Sunday-Early AM	60	30
Route 10 / 14	Sunday-Evening	60	30
Route 12	Weekday-Late Evening	60	30
	Saturday-Base	60	30
	Saturday-Late Evening	60	30
	Sunday-Base AM	60	30
	Sunday-Peak	60	30
	Sunday-Evening	60	30
Route 19 / 38 / 39	Weekday-Late Evening	47	30
	Saturday-Base	47	30
	Saturday-Early Evening	52	30
	Saturday-Late Evening	47	30
	Sunday-Base AM	47	30
	Sunday-Peak	50	30
	Sunday-Evening	48	30
Route 25	Weekday-Early Evening	60	30
	Weekday-Late Evening	60	30
	Saturday-Early AM	60	30
	Saturday-Base	60	30
	Saturday-Early Evening	60	30
	Saturday-Late Evening	60	30
	Sunday-Base AM	60	30
	Sunday-Evening	60	30
Route 31	Weekday-Early Evening	60	30
	Weekday-Late Evening	60	30
	Saturday Early AM	50	30

Route	Operating Period	Existing Headway	Proposed Headway
	Saturday-Early Evening	60	30
	Saturday-Late Evening	60	30
	Sunday-Base AM	60	30
	Sunday-Peak	60	30
Route 34 / 40	Weekday-Base	60	30
	Weekday-Early Evening	60	30
	Weekday-Late Evening	60	30
	Saturday-Early Evening	60	30
	Saturday-Late Evening	60	30
	Sunday-Base AM	60	30
	Sunday-Evening	60	30

5.3 Demand-Based Frequency Improvements

Growing ridership will also require an increase in service levels on existing routes. This will help make the service more convenient and (where crowding occurs) more comfortable.

To ensure that resources are being spend on routes that will benefit most from a service increase, the existing utilization (boardings per revenue vehicle hour) of each route by period was reviewed and compared against the service utilization standard. Routes that achieved a high productivity were targeted for an increase in service frequency over the five year plan. Based on the review of existing services and the remaining budget available, the following demand-based frequency improvements are detailed in **Table 6.** The service hour implications of this change are noted in **Section 7.0**.

Table 6: Proposed Demand-Based Frequency Changes

Route	Operating Period	Existing Headway	Proposed Headway
Route 3	Weekday-Early AM	25	30
	Weekday-AM Peak	15	10
	Weekday-PM Peak	15	10
	Saturday-Peak	17	15
Route 5	Weekday-AM Peak	30	20
	Weekday-PM Peak	30	20
	Saturday-Peak	32	30
Route 10 / 14	Weekday-Early Evening	30	20
Route 12	Saturday-Early AM	50	30
	Saturday-Peak	50	30
Route 13	Sunday-Peak	30	20
	Sunday-Evening	30	20

Route	Operating Period	Existing Headway	Proposed Headway
Route 15 / 21	Sunday-Peak	30	20
Route 20	Sunday-Peak	30	20
	Saturday-Early AM	45	30
Route 25	Sunday-Peak	27	30
Route 31	Weekday-Early AM	30	20
	Weekday-AM Peak	30	20
	Weekday-Base	30	20
	Weekday-PM Peak	30	20
Route 33	Weekday-Base	13	10
Route 34 / 40	Weekday-AM Peak	45	30
	Weekday-PM Peak	45	30
	Saturday-Peak	40	30
	Sunday-Peak	40	30
Route 94	Weekday-AM Peak	26	20
	Weekday-Base	-	20
	Weekday-PM Peak	23	15
Route 102 / 106	Weekday-Early Evening	20	15
	Weekday-Late Evening	35	20

5.4 Alternative Service Delivery Strategy

A number of transit systems across North America are rethinking how transit services are delivered. Customers are demanding greater customization of their mobility options; seeking more adaptable services that adjust to when they want to travel in real-time, without relying on a published schedule. Similarly, municipalities continue to seek solutions to reduce costs and improve productivity of services. Fixed-route transit solutions do not always meet these two goals, particularly in low demand areas characterized by low density neighbourhoods, employment areas designed around the private automobile and large tracts of open or greenfield space. This combination of factors makes it difficult to provide fixed-route service cost-effectively and in a manner that meets rising customer expectations.

To address these circumstances, it is recommended that London Transit implement a new Alternative Service Delivery model in select low-demand areas of the city. The Alternative Service Delivery model should be designed as a shared-ride, demand-responsive service that use smaller vehicles and mobile app technology to provide mobility to customers. The mobile app is also used to help optimize trips, increasing the number of shared rides that can be accommodated without sacrificing service quality.

Two pilots are recommended during the five year plan:

- Innovation Park / Route 37 midday; and
- Lambeth.

5.4.1 Innovation Park and Route 37

Innovation Park is large employment area located on the edge of south-east London.

Description of Service and Issues

Innovation Park is a four-phase City-owned park located north of Highway 401, west and east of Veteran's Memorial Parkway, and south of Hamilton Road. It is a growing employment area in the city, with a focus on manufacturing and warehousing industries. These employers have varied shift times, which make it difficult to service by fixed-route transit. As the area has continued to grow, there have been more requests for service as a way of attracting and retaining employees.

Just north of Innovation Park is another major business park/industrial area, which is currently serviced by Route 37. Route 37 operates a peak-only service between 6:42am to 8:30am and between 3:28pm and 4:51pm, connecting passengers to Argyle Mall. For employees that work outside of these hours, transit is not a viable option.

There are five other routes that connect to Argyle Mall, with Route 2, Route 3 and Route 35 providing an opportunity for residents to connect to the first 6:42am Route 37 bus (see **Table 7**). While Route 7 does not connect to the first Route 37 bus, ridership on the route is low and it would likely not attract a significant number of passengers to Route 37. Route 7 also closely parallels Route 2, with a number of customers in walking distance of both routes.

Route 17 does not arrive at Argyle Mall terminal until 6:59am, after the first Route 37 bus has departed. For employees living along Oxford Street, the first available connection to Route 37 would be 7:12am, which does not accommodate a 7:00am shift. Extending the east-bound start-time of Route 17 by 30 minutes in the morning would better connect residents that live along or connect to Oxford Street to this industrial area.

Table 7: Connections to First Run on Route 37

Route	Departure from Argyle Mall		
Route 37	6:42am	7:12 AM	7:42am
Route	**Eastbound Arrival at Argyle Mall**		
Route 17	-	6:59am	7:19am
Route 2	6:26am	6:50am	7:09am
Route 3	6:21am	6:57am	7:38am
Route 35	6:33am	7:03am	7:33am
Route 7	-	6:48am	7:09am

Recommendation

A number of service improvements are recommended for the introduction of service to Innovation Park and improvements to the Route 37 service. These are illustrated in **Figure 19** (conceptual use only) and described in more detail below:

Innovation Park

1. Continue to assess on-demand Alternative Service Delivery strategies that could be used to provide transit service to Innovation Park as an alternative to a fixed-route transit service. This should include:
    a. Review of service delivery models and the use of dedicated or non-dedicated vehicles;
    b. Fare integration opportunities with current fare media; and
    c. Exploration of mobile app technology.
2. Pilot an on-demand Alternative Service Delivery strategy to Innovation Park for a period of one to two years. Assess the effectiveness of the model on providing cost-effective and attractive services to customers. The pilot should generally follow the service design guidelines below:
    a. Operate with a connection to Argyle Mall or White Oaks Mall (connections to the fixed-route transit network); and
    b. Recommended service span: 6:30am to 7:00pm on weekdays (12.5 hours daily);
3. Modify and extend the ASD model to other areas of the City as warranted.

Route 37

1. Operate an on-demand Alternative Service Delivery strategy in the Route 37 service area during the midday weekday period from 8:30am to 3:30pm (7 hours daily). This should be an extension of the Innovation Park ASD service (using the same vehicle).
2. In the medium-term, review ridership data on both the Innovation Park and Route 37 service and identify potential options to combine the two services into one ASD service, with connections to White Oaks Mall and Argyle Mall transit terminals.

Route 17

1. Extend Route 17 by one run in the weekday early-AM by 30 minutes to ensure eastbound connections to Route 37 and Innovation Park at Argyle Mall.

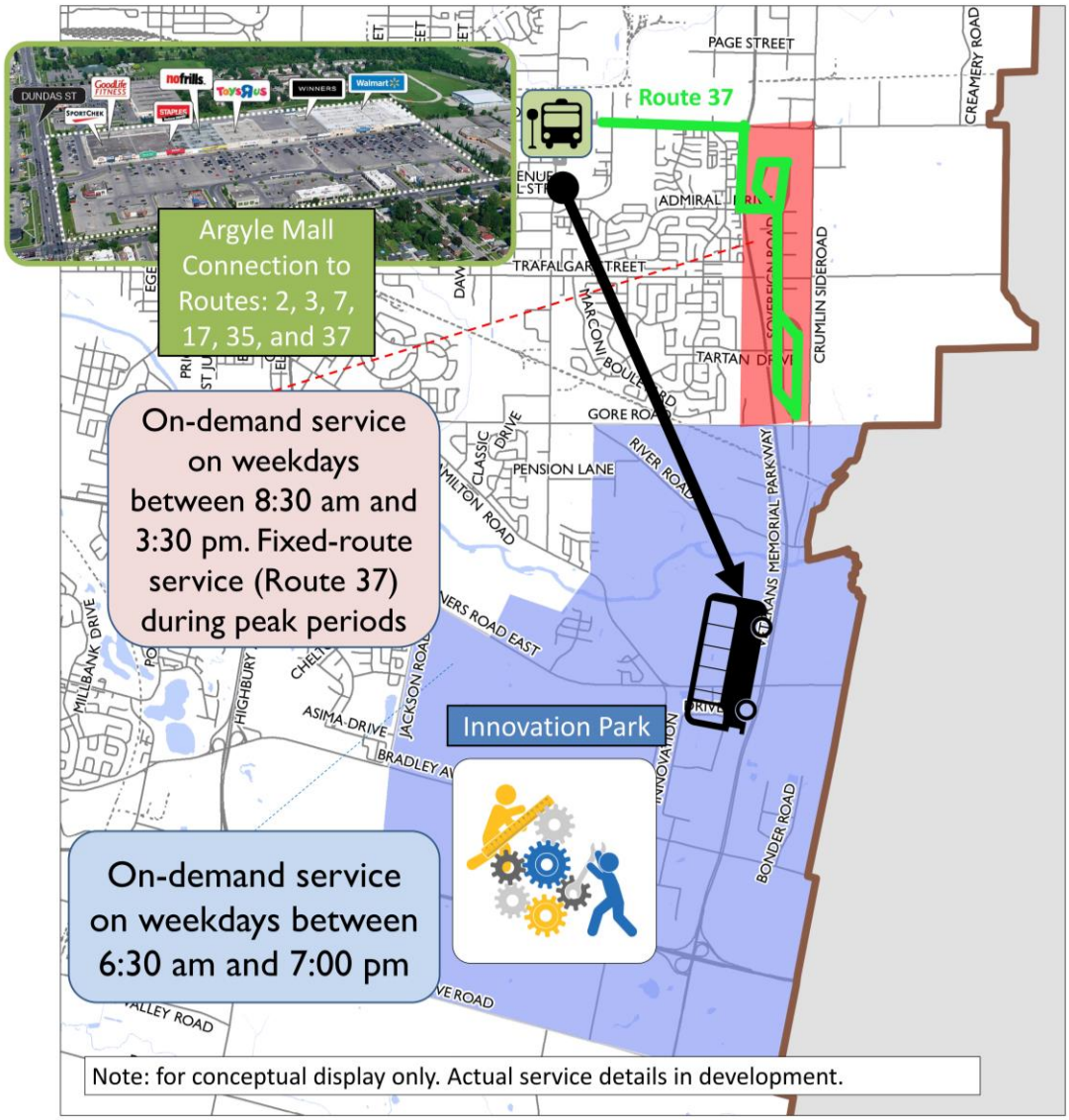


Figure 19: Proposed Alternative Service Delivery in Innovation Park/Route 37

Service Hours and Vehicle Requirements – Route 37 / Innovation Park

- Annual Service Hour Requirements: +3,150
- New Bus Purchase Requirements: +1 if a dedicated service model is used (same vehicle can be used to provide the midday Route 37 service). If a non-dedicated service model used, no increase in fleet required.

Service Hours and Vehicle Requirements – Route 17 Extension

- Annual Service Hour Requirements: +750
- New Bus Purchase Requirements: 0

5.4.2 Lambeth

Lambeth is an established residential community on the south-west fringe of London which is predominantly comprised of single-detached dwellings. There is currently one fixed-route service operated by the LTC.

Description of Service and Issues

London Transit currently operates local Route 28 between Lambeth and Westmount Mall. The route has low ridership and does not meet minimum productivity targets in London Transit's Service Standards document, but is necessary to maintain the Proximity target in the same Service Standards document. To address the underperformance of this route, the 2019 London Transit Service Plan will realign Route 28 to connect to White Oaks Mall. The proposed modification will operate during the weekday peak periods only and will also provide new service to a number of employers on Exeter Road and White Oaks Road.

Recommendation

It is recommended that LTC monitor ridership and productivity on the 2019 revision to Route 28 from Lambeth for a period of two to three years. If the new alignment results in higher ridership that meets minimum productivity targets, the route should be maintained. If productivity targets are not being met, the following recommendations should be considered (as illustrated in **Figure 20**).

1. Remove Route 28 and replace with an on-demand Alternative Service Delivery service. The preliminary service model should include the following:
    a. Operate on weekdays between 6:30am to 10:30am and from 2:30pm to 7:00pm;
    b. Explore connection opportunities to either White Oaks Mall or Westmount Shopping Centre. This should be based on community consultation and existing ridership patterns.

Service Hours and Vehicle Requirements

- Annual Service Hour Requirements: 0 (no additional service hours required).
- New Bus Purchase Requirements: No additional vehicles required (use existing 40ft bus or replace with smaller vehicle if dedicated service model used). If a non-dedicated service model used, potential to reduce peak fleet requirements by one.

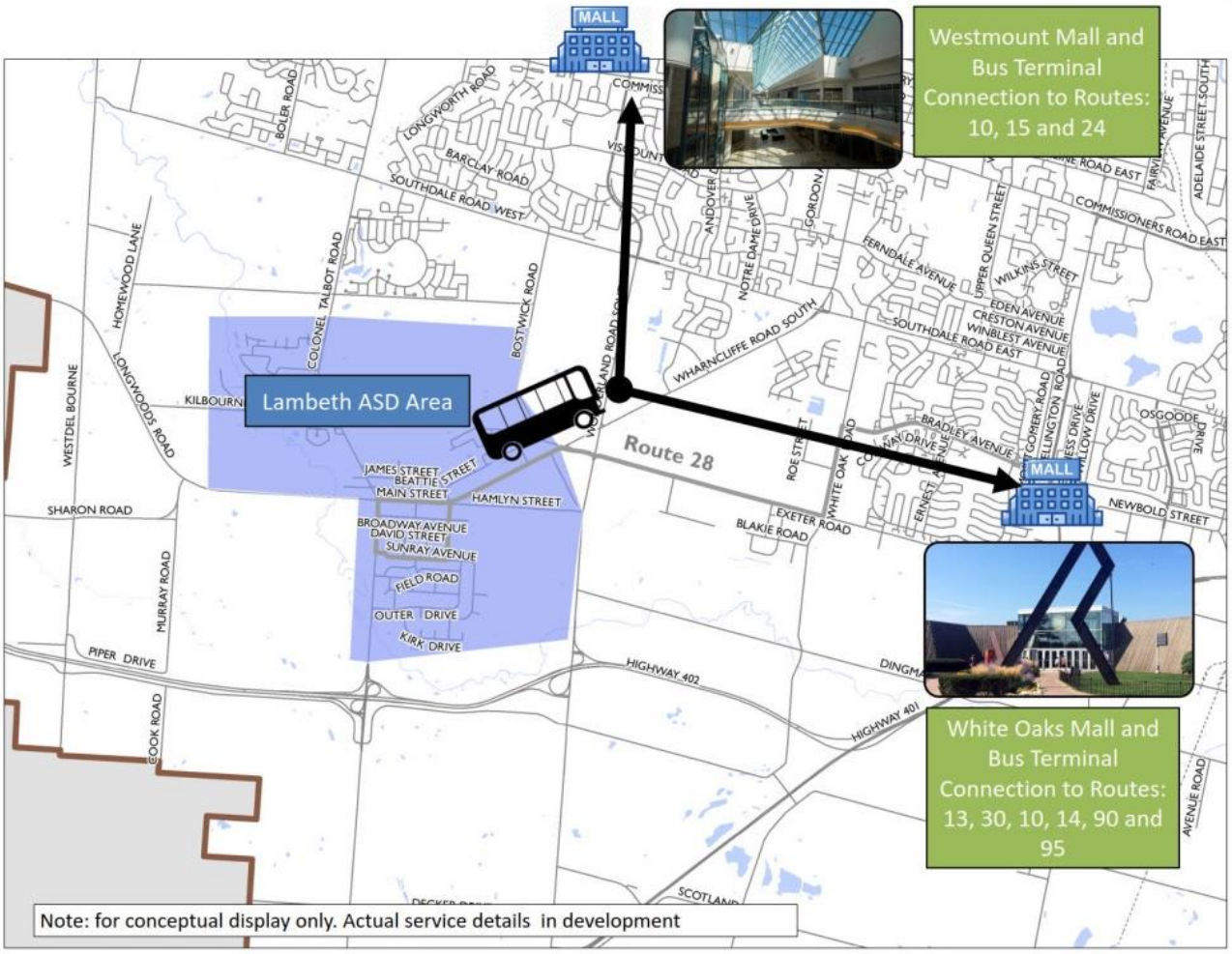


Figure 20: Proposed Alternative Service Delivery to Lambeth

5.5 Hours of Service Extensions

The previous 2015-2019 Transit Master Plan recommended an extension of the existing hours of service operated by London Transit. A number of these modifications were proposed for the 2019 horizon. This included the extension of weekday and Saturday service from 12:00am to 1:00am and the extension of Sunday service from 8:00am to 7:00am on a number of core routes. In 2019, the LTC will introduce early service on Sunday and the extension of weekday and Saturday service on eleven routes. The extension of these services will provide added convenience and flexibility for London Transit customers, particularly for students and employees that work early morning and late evening shifts. Due to service priorities a number of routes were not implemented as part of the 2019 plan and are therefore deferred to 2023.

The recommended service hour improvements are for the following:

1. Routes 1, 3, 5, 6, 7, 11, 12, 25 – Increase hours of service from 12:00am to 1:00am, Monday to Saturday (excluding statutory holidays).
2. Routes 1, 3, 5, 6, 7, 11, 12, 25 – Start service at 7:00am on Sundays (from 8:00am today).

5.6 Service Summary

The outcomes of service changes proposed is a cumulative effort to align with strategic directions framed by the public and the review of existing services.

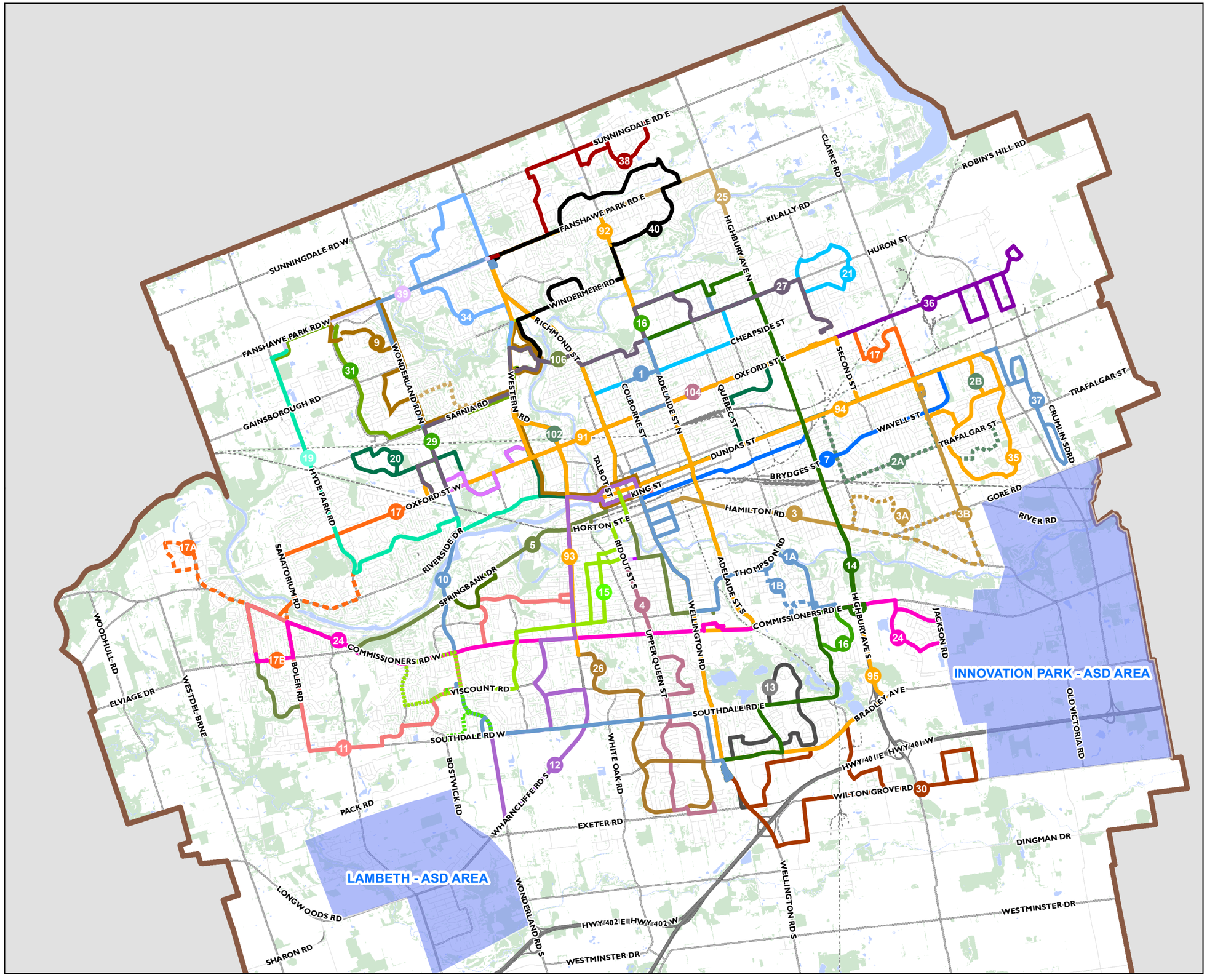
A breakdown of the proposed revenue vehicle hours and expansion of peak vehicle requirements by route/service is noted in **Table 8**. The overall change in the service network by 2024 based on the above recommendation is illustrated in **Figure 21**.

Table 8: Recommended 2024 Network Service Summary

Route	Alignment Changes / New Route	Frequency Priority	Sixty Minute Headways	Annual Revenue Hour Increase	Expansion Vehicles Required
Route 3		✓		3,890	3
Route 5		✓	✓	4,590	1
Route 7			✓	90	-
Route 11	✓		✓	11,620	3
Route 9			✓	290	-
Route 10	✓		✓	2,130	-
Route 14			✓	1,720	-
Route 102 / 106		✓		1,400	-
Route 12			✓	2,580	-
Route 13		✓		3,000	-
Route 15 / 21		✓	✓	1,160	-
Route 17				950	-
Route 19 / 38 / 39			✓	1,530	-
Route 20		✓		690	-
Route 24	✓			2,360	1
Route 25			✓	2,100	-
Route 29		✓		4,770	3
Route 31		✓	✓	3,330	1
Route 33		✓		2,300	-
Route 34 / 40		✓	✓	10,540	2
Route 91	✓			4,550	2

Route	Alignment Changes / New Route	Frequency Priority	Sixty Minute Headways	Annual Revenue Hour Increase	Expansion Vehicles Required
Route 94		✓		6,500	2
Route 95	✓			8,910	3
ALTERNATIVE SERVICE DELIVERY					
Innovation Park / Route 37 Alternative Service Delivery	✓			3,150*	1*
Lambeth Alternative Service Delivery	✓			-*	-*
DEFERRALS					
Operate until 1 AM Monday to Saturday: Routes 1, 3, 5, 6, 7, 11, 12, 25				1,120	-
Start service at 7 AM on Sunday: Routes 1, 3, 5, 6, 7, 11, 12, 25				2,740	-
Grand Total				**88,010**	**22**

* Assumes a dedicated service delivery model is used. If a non-dedicated service delivery option is used, this may reduce service hour and peak vehicle requirements.



Five-Year Service Plan (2020-2024)

Figure #21: Proposed 2024 Network

- LTC Bus Route
- Alternative Service Delivery Area
- Municipal Boundary
- Railway
- Waterbody
- Vegetation

0 0.5 1 2 km

MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: SW
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 18-8035
STATUS: FINAL
DATE: 2019-02-12

6.0 COMMUNITY FEEDBACK

A second round of consultation was conducted to present the draft 2024 recommendations for London Transit and allow residents to provide their feedback on recommended changes. A public open house centre was hosted at the Central Public Library in downtown London on January 29 between 2:00-4:00pm and 6:00 - 8:00pm with approximately 45 people in attendance. The public open house included several informative and interactive boards as well as a comment sheet (See **Appendix D** boards displayed at the public open house).

To ensure residents were provided a fair opportunity to be heard, an on-line survey was also available between January 28 and February 7, 2019. Overall, there were 278 completed responses to the on-line survey. The public open house boards, comment sheets and on-line survey included the same questions for consistency.

There were overall 329 unique responses combined. This is displayed in the **Figure 22** below.

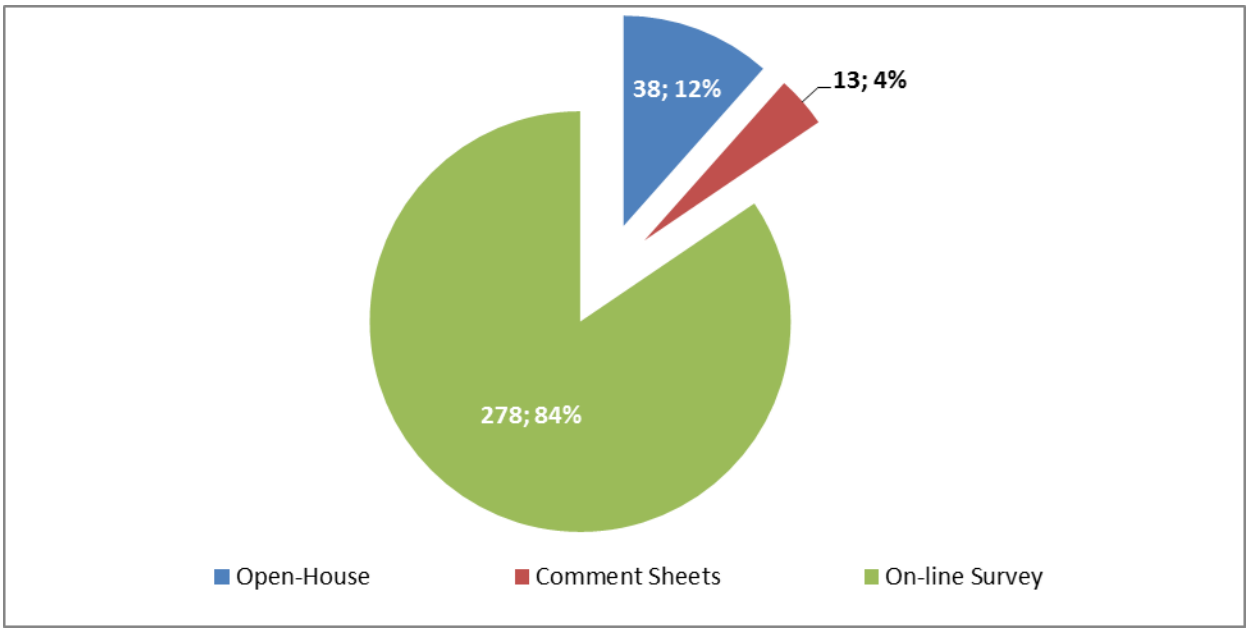


Figure 22: Public Open House Participation Rate

For the purposes of this section, the overarching responses to the presented draft recommendations are discussed. For full detail from the on-line survey, public open house and comment sheets, see **Appendix C**.

6.1 Draft Network Response

The content in the public open house, comment sheets and on-line survey was informative of the many recommended changes proposed in **Section 5.0.** The public was asked to select one of the following ratings for each of the recommended changes:

- The proposed routing will benefit me;
- The proposed routing is not ideal for me, however it has overall benefits to transit users;
- The proposed routing negatively impacts me; or
- This change does not impact me.

In summary, the overall changes were generally met with positive praise. The following section summarizes the feedback on each of the improvements in the draft 2024 network.

6.1.1 Frequency Improvements

Increasing overall levels of service on routes experiencing high demand and routes with infrequent hourly service was highly supported by the public. According to the on-line survey and feedback from the comment sheets and public open house, over 90% of respondents believe that these improvements will benefit them. The majority of the comments provided by the public justify the apparent need for more frequent and reliable service.

While most responses were positive; some participants had a differing opinion about where services levels should be increased. Suggestions for alternative service improvements were reassessed against existing ridership to confirm the prioritization of service improvements. No further modifications where made as a result of this reassessment.

There were also comments from some participants to use clock-face headways when frequency improvements are made. Clock-face headways provide a consistent schedule (e.g. every 15, 30 or 60 minutes), however, can make operations less efficient (as the route may require more non-productive layover time to accommodate the clock-face headway. As a result of these comments, some of the preliminary route schedule recommendations were adjusted to achieve a clock-face headway when they resulted in minimal impacts on operating cost and efficiency (e.g. moving from a 28 minute headway to a 30 minute headway). This helped to promote the simplicity of the schedule for customers.

6.1.2 Byron and Talbot Village

The restructuring in Byron and Talbot Village had moderate public support with more than half of respondents in support of the service change and approximately 18% not in favour of the change. Submissions from the on-line survey show that there opposing perspectives with respect to the amount of service provided. However, participants and online respondents generally agreed that there are benefits associated with an east-west connection along Commissioners Road West to Victoria Hospital. There was also general support of having a connection between Talbot Village and Byron. While Route 17 was not modified in Byron in the plan, some respondents believe that the branch route could be modified to better service people in these areas. Moreover, some respondents also believe that the

Westwood Power Centre at the intersection of Wonderland Road South and Southdale Road East could be better served.

In summary, this strategy has modest support from respondents with some opposition around routing and services in other areas of Southwest London. The proposed route modification was revisited to assess impact on existing passengers. As a result of this, no modifications to the preliminary route modification were made. However, London Transit should continue the discussion with residents in these areas as part of its annual service plan process.

6.1.3 Route 95 Highbury Express

The new Route 95 express route was met with strong support from the public with only 7% of respondents in disagreement with the proposal. Based on discussions with LTC staff and the public at the public open house, a suggestion was made to shift a stop on Bradley Avenue from Pond Mills Road to Millbank Drive. Suggestions were made around the consideration of an additional stop between Adelaide Street South and White Oaks Mall (contingent on service coverage and historical stop activity). The majority of comments from the public re-iterate their support for the proposal. Some respondents believe the terminus location to the north should be extended further while other support the direct connection to Fanshawe College. Based on a further review of ridership patterns, the recommendation to terminate the route at Fanshawe College was maintained.

6.1.4 Wonderland Road and Sarnia Road (Route 10)

The proposed modifications to Route 10 have modest support from the public with 50% of respondents benefitting from the service change (83 respondents). However, approximately 32% of respondents believe the change will negatively impact them. Respondents expressed their gratitude for providing service along Wonderland Road North to Masonville Place. However, the respondents also believe the new routing would negatively impact customers destined to Western University from south of Oxford Street West on Route 10, as customers would now need to transfer onto Route 29 or Route 27 to complete the trip. Respondents are also concerned about the increase in ridership on Route 29 as a result of transfers from Route 10. While their concerns are valid, the draft plan proposes an increase in frequency on Route 29 / Route 27 to match the increase in demand on this corridor. This will also reduce the transfer time for customers destined to Western University.

While there are clear advantages and disadvantages to this proposal, the majority of respondents are in support modifying Route 10, as it provides enhanced coverage on Wonderland Road north of Sarnia Road, and a more direct trip to Masonville Place.

6.1.5 Route 91 Oxford Extension

The extension of Route 91 to Argyle Mall was met with strong support with only 3% of respondents (4) in disagreement with this proposal. The proposal improves connections to Argyle Mall and enhances coverage along Second Street. No modifications were made to the preliminary route modification as a result of public comments.

6.1.6 Innovation Park / Route 37 – Alternative Service Delivery

Alternative Service Delivery to Innovation Park had support in the community with only 8% (5 submissions) of respondents in disagreement with the proposal. The majority of comments submitted re-iterate the support of the alternative service delivery approach. Conversations with participants at the public open house resulted a proposed earlier extension of the service from 7:00am to 6:30am to better accommodate early morning shift times.

6.1.7 Lambeth – Alternative Service Delivery

Providing on-demand alternative service delivery approach to Lambeth was supported by the participants and respondents, with only 9% of online respondents (5) who believe the service will negatively affect them. Concerns that were raised include the ability to use the service if customers do not have access to a smartphone. The implementation plan for alternative service delivery will need to be developed as a next step, and the use of the service for customers that do not have a smartphone will be a key part of the service design. Implementation of this service model will be dependent on the performance of the redesign of Route 28 to Lambeth, as part of the 2019 service modifications.

6.2 Other Considerations

The final question in the on-line survey and comment sheets allowed the public to recommend service changes they felt were not addressed in the five-year plan. A summary of the comments provided by the public is detailed in **Appendix E**. While suggestions from the public varied significantly, there were the following recurring themes:

- Over-capacity routes along the Sarnia Road and Oxford Street corridors. This was addressed by increasing the frequency of service on Route 29;
- Removal of Route 26 local service to downtown. A new Route 93 express service in the 2019 service plan operates a section of the Route 26 local service south of Commissioners Road East. This service will be replaced with Route 93, and will no longer go directly downtown. After further review of this area, it was felt that there continued to be a number of frequent transfer opportunities to mitigate any increase in travel time from customer destined downtown;
- A desire for a high quality real-time transit application. This suggestion was noted, but did not form part of the Transit Master Plan. LTC should continue to look at opportunities to improve real-time information to its customers; and
- Higher quality shelters with heating or lighting. This suggestion did not form part of the scope of the Transit Master Plan. LTC should continue to look at opportunities to increase the quality of shelters.

It should be noted that a number of comments received related to the proposed 2019 route modifications currently being proposed by London Transit as part of the Annual Service Plan process. These comments were noted, but were not addressed as part of this 2020 to 2024 plan.

7.0 FIVE-YEAR PHASING PLAN

The following section presents the order in which service changes should be made as well as overall service hour and fleet requirements.

7.1 Phasing Plan

A five-year phasing plan was developed to distribute the service improvements noted in **Section 5.0** over a five year period, adding between 16,500 and 18,000 of revenue vehicle hours annually. **Tables 9** through **13** present each of the improvements between 2020 and 2024. The phasing plan was based on a number of principles:

- Pairing service improvements together by route to minimize service changes by year;
- Pairing service improvements for routes that interline together;
- Prioritizing service modifications that have the highest potential for ridership growth first; and
- Distributing service improvements so that service hours and peak vehicle requirements are not onerous during a single year.

Table 9: Implementation Strategy – 2020 (Year 1)

Route	Change to Route Alignment / New Route	Demand Based Frequency Change	Sixty (60) Minute Frequency Change	Description
Route 17		✓		• Provide Early-AM weekday service for eastbound connections at Argyle Mall to Route 37 and Innovation Park Alternative Service Delivery • Increase headway from: ○ 40 to 30 during Saturday Early-AM
Route 31		✓	✓	• Increase headway from: ○ 30 to 20 during Weekday-Early AM ○ 30 to 20 during Weekday-AM Peak ○ 30 to 20 during Weekday-Base ○ 30 to 20 during Weekday-PM Peak ○ 60 to 30 during Weekday-Early Evening ○ 60 to 30 during Weekday-Late Evening ○ 50 to 30 during Saturday Early-AM ○ 60 to 30 during Saturday-Early Evening ○ 60 to 30 during Saturday-Late Evening ○ 60 to 30 during Sunday-Base AM ○ 60 to 30 during Sunday-Peak
Route 34 / 40		✓	✓	• Increase headway from: ○ 45 to 30 during Weekday-AM Peak ○ 60 to 30 during Weekday-Base ○ 45 to 30 during Weekday-PM Peak ○ 60 to 30 during Weekday-Early Evening ○ 60 to 30 during Weekday-Late Evening ○ 40 to 30 during Saturday-Peak ○ 60 to 30 during Saturday-Early Evening ○ 60 to 30 during Saturday-Late Evening ○ 60 to 30 during Sunday-Base AM ○ 40 to 30 during Sunday-Peak ○ 60 to 30 during Sunday-Evening

Route	Change to Route Alignment / New Route	Demand Based Frequency Change	Sixty (60) Minute Frequency Change	Description
Innovation Park and Route 37 Alternative Service Delivery	✓			• Introduce Alternative Service Delivery model between 6:30am and 7:00pm • Extend service to the Route 37 industrial area during Weekday Base period (8:30am to 3:30pm)

Table 10: Implementation Strategy – 2021 (Year 2)

Route	Change to Route Alignment / New Route	Demand Based Frequency Change	Sixty (60) Minute Frequency Change	Description
Route 25			✓	• Increase headway from: ○ 60 to 30 during Weekday-Early Evening ○ 60 to 30 during Weekday-Late Evening ○ 60 to 30 during Saturday-Early AM ○ 60 to 30 during Saturday-Base ○ 60 to 30 during Saturday-Early Evening ○ 60 to 30 during Saturday-Late Evening ○ 60 to 30 during Sunday-Base AM ○ 60 to 30 during Sunday-Evening
Route 94		✓		• Introduce 20 minute frequency during Weekday-Base • Increase headway from: ○ 26 to 20 during Weekday-AM Peak ○ 23 to 15 during Weekday-PM Peak
Route 95	✓			• Introduce Highbury Express Route 95 operating 20 minute frequencies during the following periods: ○ Weekday-AM Peak ○ Weekday-Base ○ Weekday-PM Peak ○ Weekday-Early Evening

Table 11: Implementation Strategy – 2022 (Year 3)

Route	Change to Route Alignment / New Route	Demand Based Frequency Change	Sixty (60) Minute Frequency Change	Description

Route 10	✓	✓	✓	• Re-route service along Wonderland Road North and Fanshawe Park Road – terminate service at Masonville Place
				• Increase headway from:
				  ○ 30 to 20 during Weekday-Early Evening
				  ○ 60 to 30 during Sunday-Evening

Route 14		✓	✓	• Increase headway from:
				  ○ 30 to 20 during Weekday-Early Evening
				  ○ 60 to 30 during Sunday-Evening

Route 29		✓		• Re-introduce Route 29 (short-turn of Route 27) at the following headways and periods during the fall/winter period:
				  ○ 30 during Weekday-Early AM
				  ○ 20 during Weekday-AM Peak
				  ○ 30 during Weekday-Base
				  ○ 20 during Weekday-PM Peak
				  ○ 20 during Weekday-Early Evening
				  ○ 30 during Weekday-Late Evening

Route 33		✓		• Increase headway from: ○ 13 to 10 during Weekday-Base
Route 91	✓			• Extend Route 91 to Argyle Mall
Route 102 / 106		✓		• Increase headway from: ○ 20 to 15 during Weekday-Early Evening • 35 to 20 during Weekday-Late Evening

Table 12: Implementation Strategy – 2023 (Year 4)

Route	Change to Route Alignment / New Route	Demand Based Frequency Change	Sixty (60) Minute Frequency Change	Description

Route 3		✓		• Increase headway from:
				  ○ 25 to 30 during Weekday-Early AM
				  ○ 15 to 10 during Weekday-AM Peak
				  ○ 15 to 10 during Weekday-PM Peak
				• 17 to 15 during Saturday-Peak

Route 5		✓	✓	• Increase headway from:
				  ○ 30 to 20 during Weekday-AM Peak
				  ○ 30 to 20 during Weekday-PM Peak
				  ○ 60 to 30 during Weekday-Early Evening
				  ○ 60 to 30 during Weekday-Late Evening
				  ○ 60 to 30 during Saturday-Early AM
				  ○ 60 to 30 during Saturday-Base
				  ○ 32 to 30 during Saturday-Peak
				  ○ 60 to 30 during Saturday-Early Evening
				  ○ 60 to 30 during Saturday-Late Evening
				  ○ 60 to 30 during Sunday-Base AM
				  ○ 60 to 30 during Sunday-Peak
				• 60 to 30 during Sunday-Evening

Route 13		✓		• Increase headway from:
				  ○ 30 to 20 during Sunday-Peak
				  ○ 30 to 20 during Sunday-Evening

Route 15 / 21		✓	✓	• Increase headway from:
				  ○ 60 to 30 during Saturday-Early AM
				  ○ 30 to 20 during Sunday-Peak
				  ○ 60 to 30 during Sunday-Early AM

Route	Change to Route Alignment / New Route	Demand Based Frequency Change	Sixty (60) Minute Frequency Change	Description
Route 19 / 38 / 39			✓	• Increase headway from: ○ 47 to 30 during Weekday-Late Evening ○ 47 to 30 during Saturday-Base ○ 52 to 30 during Saturday-Early Evening ○ 47 to 30 during Saturday-Late Evening ○ 60 to 30 during Sunday-Base AM ○ 60 to 30 during Sunday-Peak ○ 60 to 30 during Sunday-Evening
Deferral from 2019 // Operate until 1:00am Monday to Saturday: Routes 1, 3, 5, 6, 7, 11, 12, 25				
Deferral from 2019 // Start service at 7:00am on Sunday: Routes 1, 3, 5, 6, 7, 11, 12, 25				

Table 13: Implementation Strategy – 2024 (Year 5)

Route	Change to Route Alignment / New Route	Demand Based Frequency Change	Sixty (60) Minute Frequency Change	Description
Route 7 / 11	✓		✓	• Re-route Route 11 to Talbot Village (previous Route 24 Route) – contingent on reconstruction of Commissioners Road West • Extend Route 11 service to Boler Road to Byron • Increase headway from: ○ 60 to 30 during Saturday-Early AM
Route 9			✓	• Increase headway from: ○ 60 to 30 during Saturday-Early AM • 60 to 30 during Sunday-Early AM

Route 12			✓	• Increase headway from:
				  ○ 60 to 30 during Weekday-Late Evening
				  ○ 50 to 30 during Saturday-Early AM
				  ○ 60 to 30 during Saturday-Base
				  ○ 60 to 30 during Saturday-Late Evening
				  ○ 60 to 30 during Sunday-Base AM
				  ○ 60 to 30 during Sunday-Peak
				  ○ 60 to 30 during Sunday-Evening

Route 20		✓		• Increase headway from:
				  ○ 30 to 20 during Sunday-Peak
				  ○ 45 to 30 during Saturday-Early AM

Route 24	✓			• Modify Route 24 along Commissioners Road to Byron (Contingent on Commissioners Road reconstruction)
Lambeth Alternative Service Delivery (Route 28)	✓			• Introduce Alternative Service Delivery and Lambeth (Contingent on success of modified Route 28) ○ Eliminate Route 28

7.2 Service Hour and Fleet Summary

Based on the modifications presented in the previous tables, the proposed revenue service hours and peak fleet expansion vehicles are summarized by year in **Table 14** below. Please note the addition of two deferrals in Year 4 (2023) as derived from the 2019 service plan.

It should also be noted that the table below does not reflect any additional non-revenue service hours that should be accounted for to allow buses the appropriate time to travel between the London Transit garage and the beginning and end of revenue service. This should be added to the overall financial plan when estimating budget impacts.

The expansion of peak vehicles required also does not reflect additional spare vehicles that are required to maintain a healthy spare ratio. This will also need to be added to the capital plan during the budgeting process.

Table 14: Annual Service Hour and Fleet Summary

Route	*Alignment Changes / New Route*	*Demand-Based Frequency*	*Sixty Minute Headways*	*Annual Revenue Hour Increase*	*Expansion Vehicles Required*
Year 1 (2020)					
Route 17		✓		950	-
Route 31		✓	✓	3,330	+1
Route 34 / 40		✓	✓	10,540	+2
Innovation Park /Route 37 Alternative Service Delivery	✓			3,150**	+1**
			Subtotal	**17,970**	**+4**
Year 2 (2021)					
Route 25			✓	2,100	-
Route 94		✓		6,500	+2
Route 95	✓			8,910	+3
			Subtotal	**17,510**	**+5**

Route	*Alignment Changes / New Route*	*Demand-Based Frequency*	*Sixty Minute Headways*	*Annual Revenue Hour Increase*	*Expansion Vehicles Required*
Year 3 (2022)					
Route 10	✓	✓	✓	2,130	-
Route 14		✓	✓	1,720	-
Route 102 / 106		✓		1,400	-
Route 29	✓	✓		4,770	+3
Route 33		✓		2,300	-
Route 91	✓			4,550	+2
			Subtotal	**16,870**	**+5**
Year 4 (2023)					
Route 3		✓		3,890	+3
Route 5		✓	✓	4,590	+1
Route 13		✓		3,000	-
Route 15 / 21		✓	✓	1,160	-
Route 19 / 38 / 39			✓	1,530	-
Deferral from 2019 // Operate until 1:00am Monday to Saturday: Routes 1, 3, 5, 6, 7, 11, 12, 25				1,120	-
Deferral from 2019 // Start service at 7:00am on Sunday: Routes 1, 3, 5, 6, 7, 11, 12, 25				2,740	-
			Subtotal	**18,010**	**+4**

Route	*Alignment Changes / New Route*	*Demand-Based Frequency*	*Sixty Minute Headways*	*Annual Revenue Hour Increase*	*Expansion Vehicles Required*
Year 5 (2024)					
Route 7 / 11	✓		✓	11,710	+3
Route 12			✓	2,580	-
Route 20		✓		690	-
Route 24	✓			2,360	+1
Route 9			✓	290	-
Route 28 / Lambeth Alternative Service Delivery	✓			-	-
			Subtotal	**17,630**	**+4**
Grand Total				***88,010***	**+22**

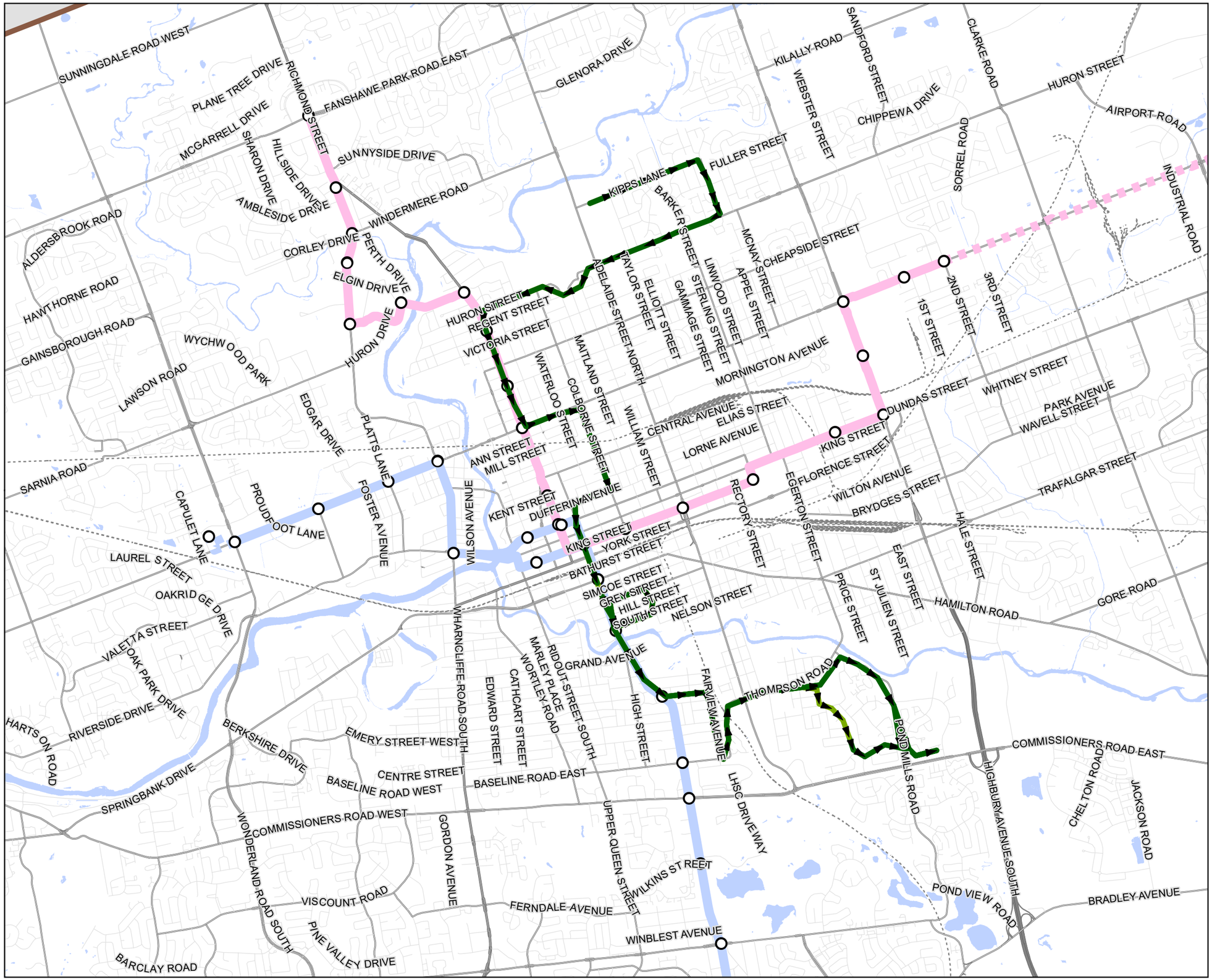
* all peak vehicle requirements are standard buses unless otherwise noted

** Alternative Service Delivery areas assumed use of dedicated vehicles. If non-dedicated vehicles are used, this may reduce revenue service hours and peak vehicle requirements.

APPENDIX A

Route Utilization Profiles

(Weekday PM-Peak Period)



RAPID TRANSIT INTEGRATION REVIEW

2017 FALL PASSENGER PROFILE

Route: 1 Direction: 0
Period: WKD PM PEAK

Passenger Profile by Route Link

- 0 - 20
- 21 - 50
- 51 - 100
- 101 - 500
- 500+
- BRT Station
- Municipal Boundary
- North-East Route
- South-West Route
- Airport Extension
- South-West Route (Mixed Traffic)
- Railway
- Waterbody

0 0.5 1 km

N W E S

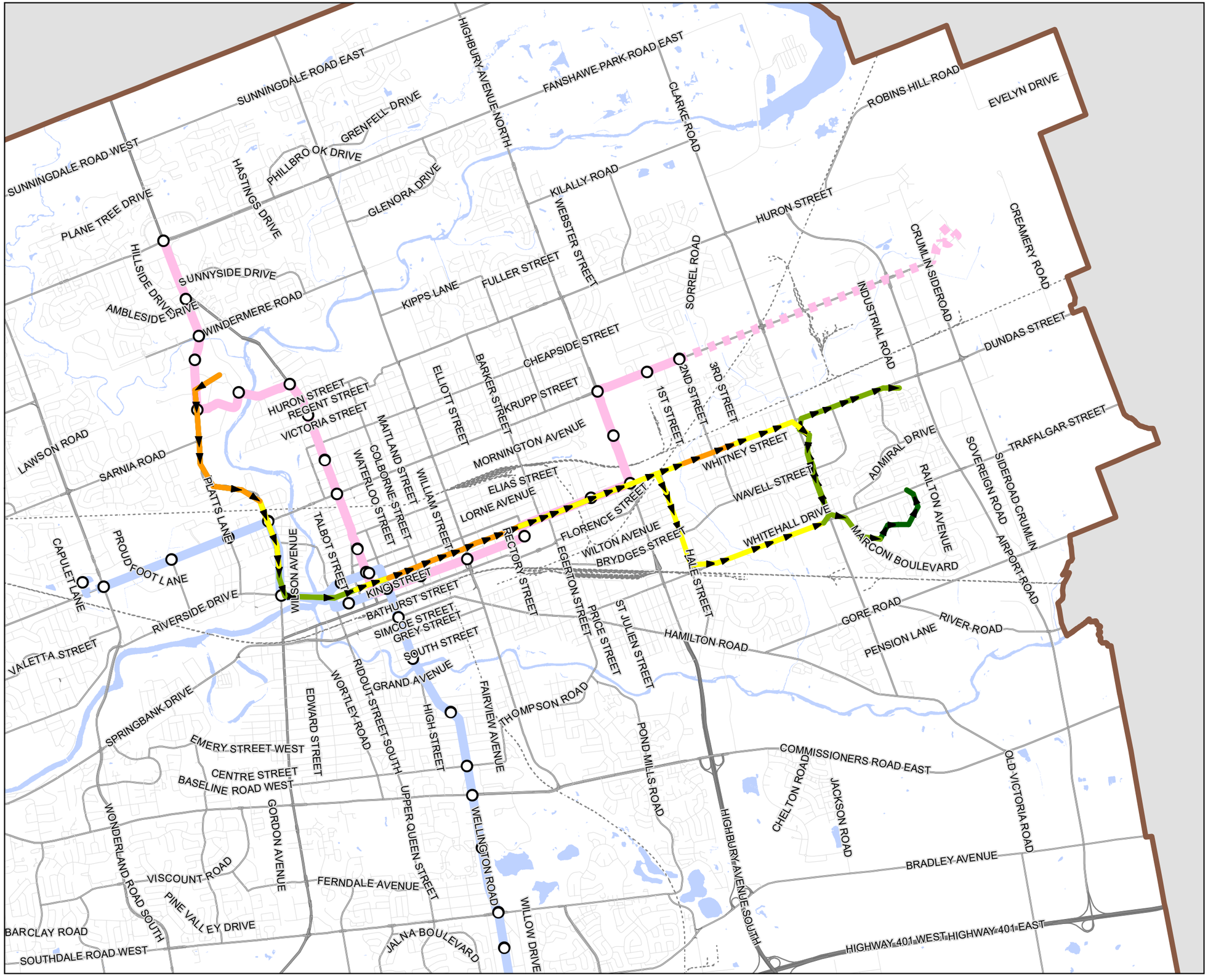
MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 188035
STATUS: FINAL
DATE: 2018-11-27



RAPID TRANSIT INTEGRATION REVIEW

2017 FALL PASSENGER PROFILE

Route: 2 Direction: 0
Period: WKD PM PEAK

Passenger Profile by Route Link

- 0 - 20
- 21 - 50
- 51 - 100
- 101 - 500
- 500+
- BRT Station
- Municipal Boundary
- North-East Route
- South-West Route
- Airport Extension
- South-West Route (Mixed Traffic)
- Railway
- Waterbody

0 0.5 1 km

N W E S

MAP DRAWING INFORMATION:
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MAP CREATED BY: KS
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FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 188035
STATUS: FINAL
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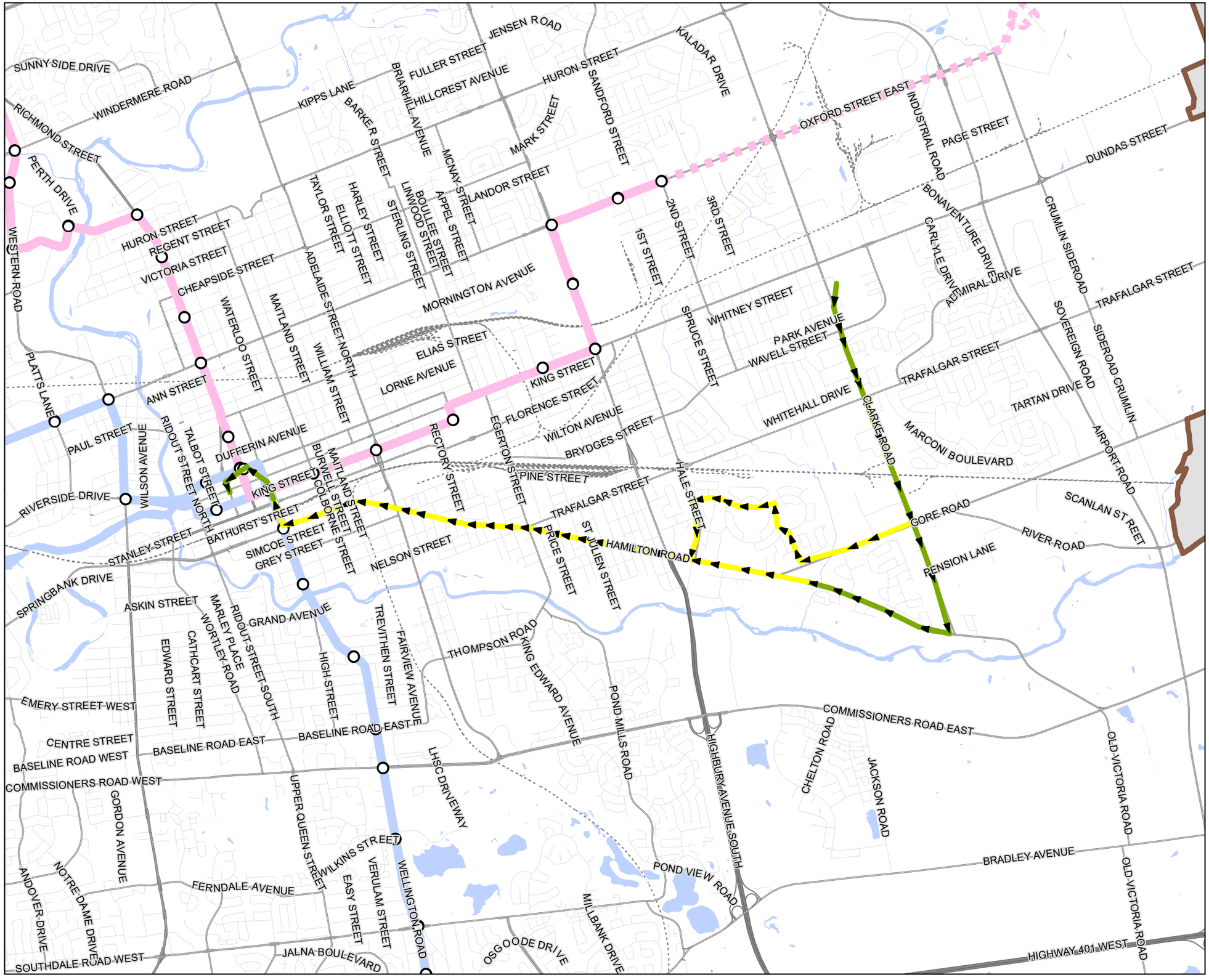

RAPID TRANSIT INTEGRATION REVIEW

2017 FALL PASSENGER PROFILE

Route: 3 Direction: 0
Period: WKD PM PEAK

Passenger Profile by Route Link

- 0 - 20
- 21 - 50
- 51 - 100
- 101 - 500
- 500+
- BRT Station
- Municipal Boundary
- North-East Route
- South-West Route
- Airport Extension
- South-West Route (Mixed Traffic)
- Railway
- Waterbody

0 0.5 1 km

N W E S

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MAP PROJECTION: NAD 1983 UTM Zone 17N

FILE LOCATION: I:\GIS\163037

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PROJECT: 188035
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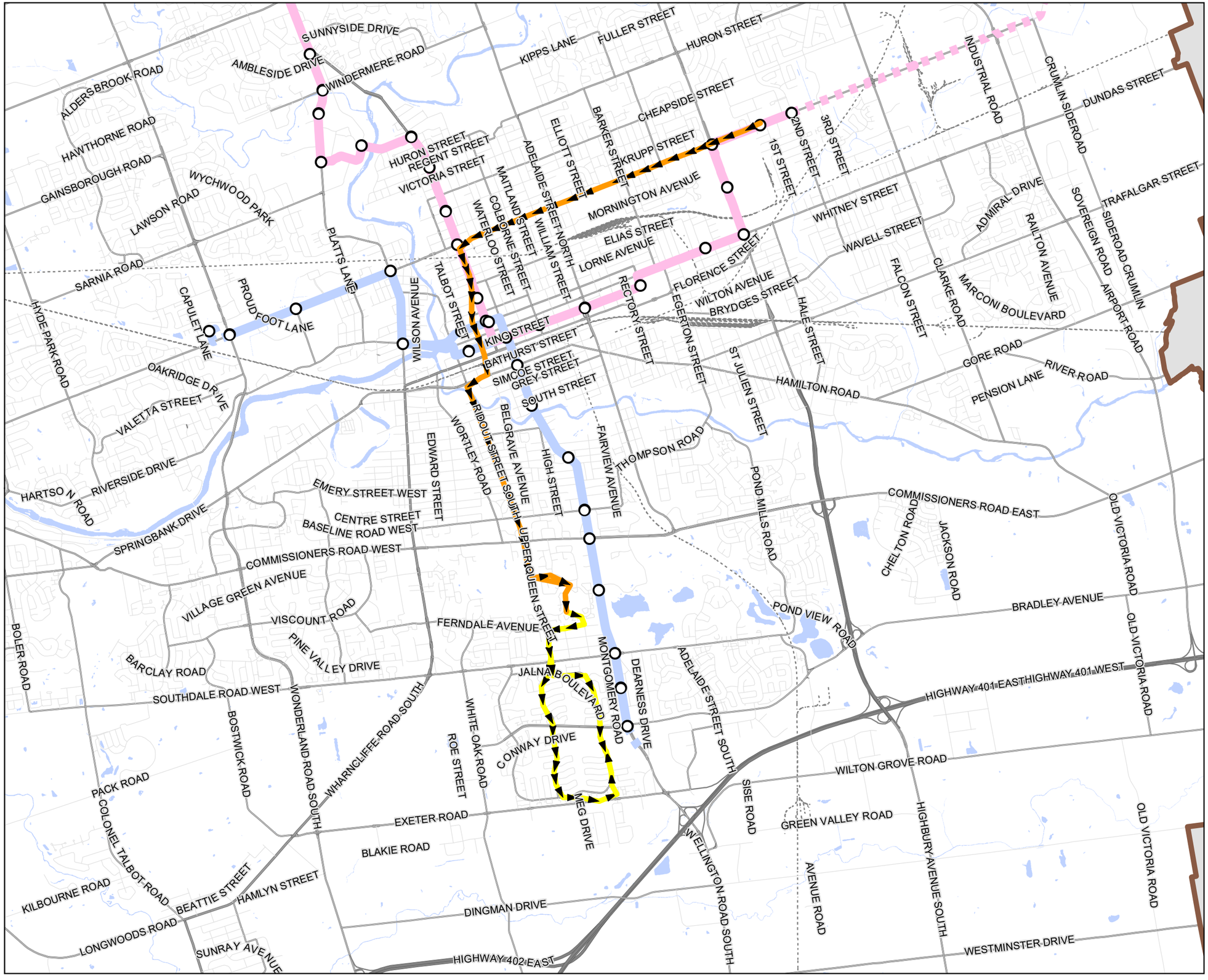

RAPID TRANSIT INTEGRATION REVIEW

2017 FALL PASSENGER PROFILE

Route: 4 Direction: 0
Period: WKD PM PEAK

Passenger Profile by Route Link

- 0 - 20
- 21 - 50
- 51 - 100
- 101 - 500
- 500+
- BRT Station
- Municipal Boundary
- North-East Route
- South-West Route
- Airport Extension
- South-West Route (Mixed Traffic)
- Railway
- Waterbody

0 0.5 1 km

N W E S

MAP DRAWING INFORMATION:
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MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 188035
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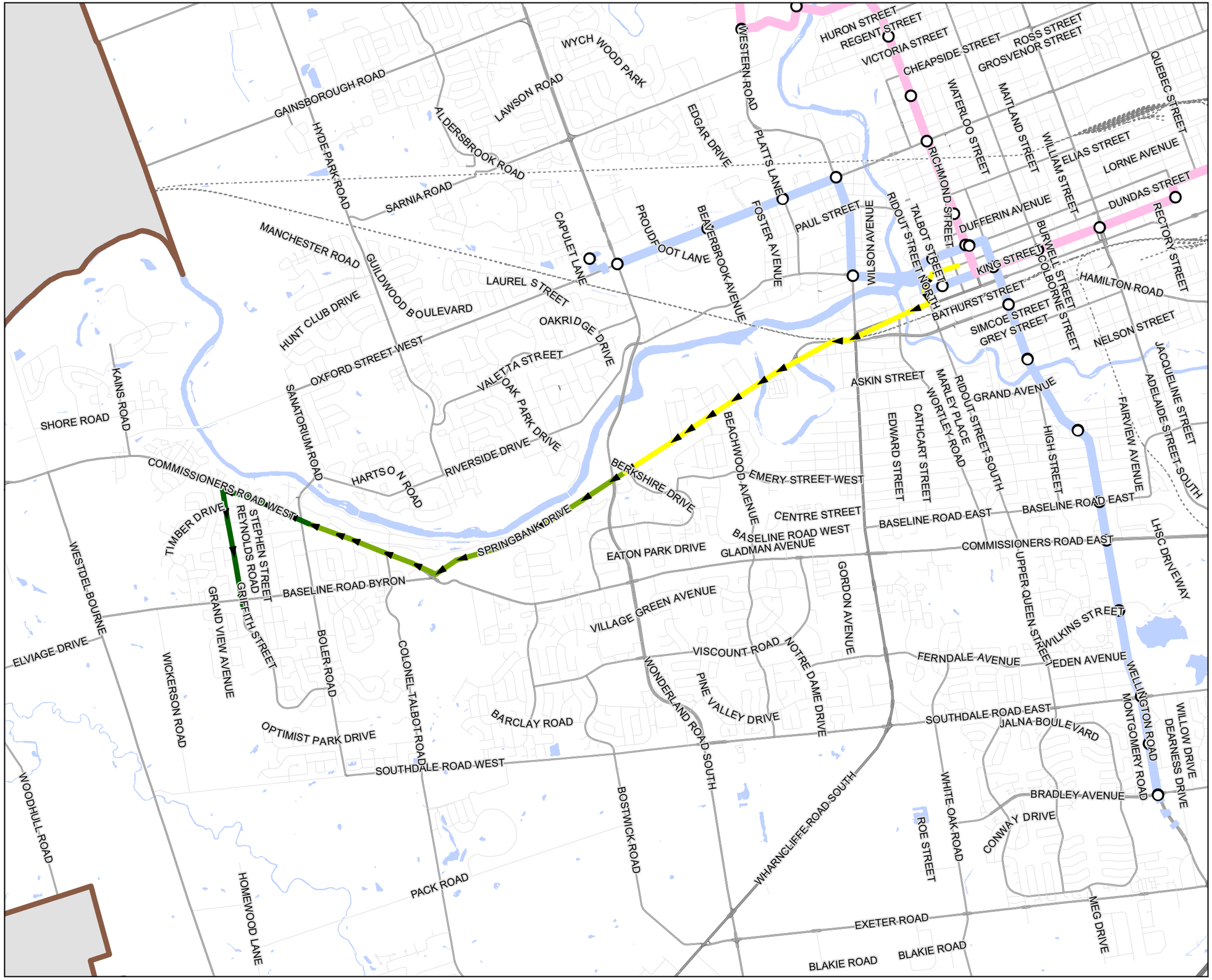

RAPID TRANSIT INTEGRATION REVIEW

2017 FALL PASSENGER PROFILE

Route: 5 Direction: 0
Period: WKD PM PEAK

Passenger Profile by Route Link

- 0 - 20
- 21 - 50
- 51 - 100
- 101 - 500
- 500+
- BRT Station
- Municipal Boundary
- North-East Route
- South-West Route
- Airport Extension
- South-West Route (Mixed Traffic)
- Railway
- Waterbody

0 0.5 1 km

N W E S

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MAP PROJECTION: NAD 1983 UTM Zone 17N

FILE LOCATION: I:\GIS\163037

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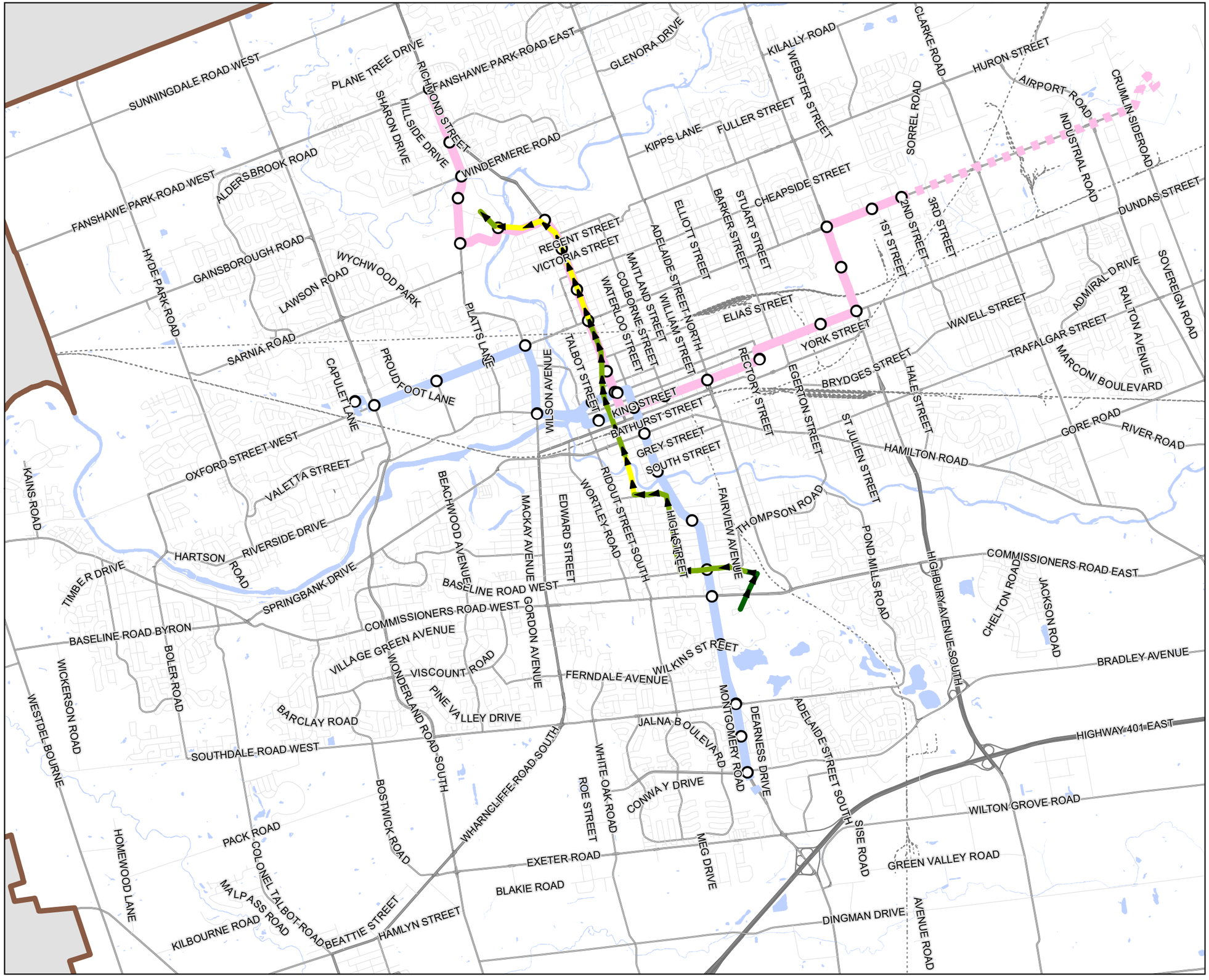

RAPID TRANSIT INTEGRATION REVIEW

2017 FALL PASSENGER PROFILE

Route: 6 Direction: 0
Period: WKD PM PEAK

Passenger Profile by Route Link

- 0 - 20
- 21 - 50
- 51 - 100
- 101 - 500
- 500+
- BRT Station
- Municipal Boundary
- North-East Route
- South-West Route
- Airport Extension
- South-West Route (Mixed Traffic)
- Railway
- Waterbody

0 0.5 1 km

N W E S

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DILLON CONSULTING

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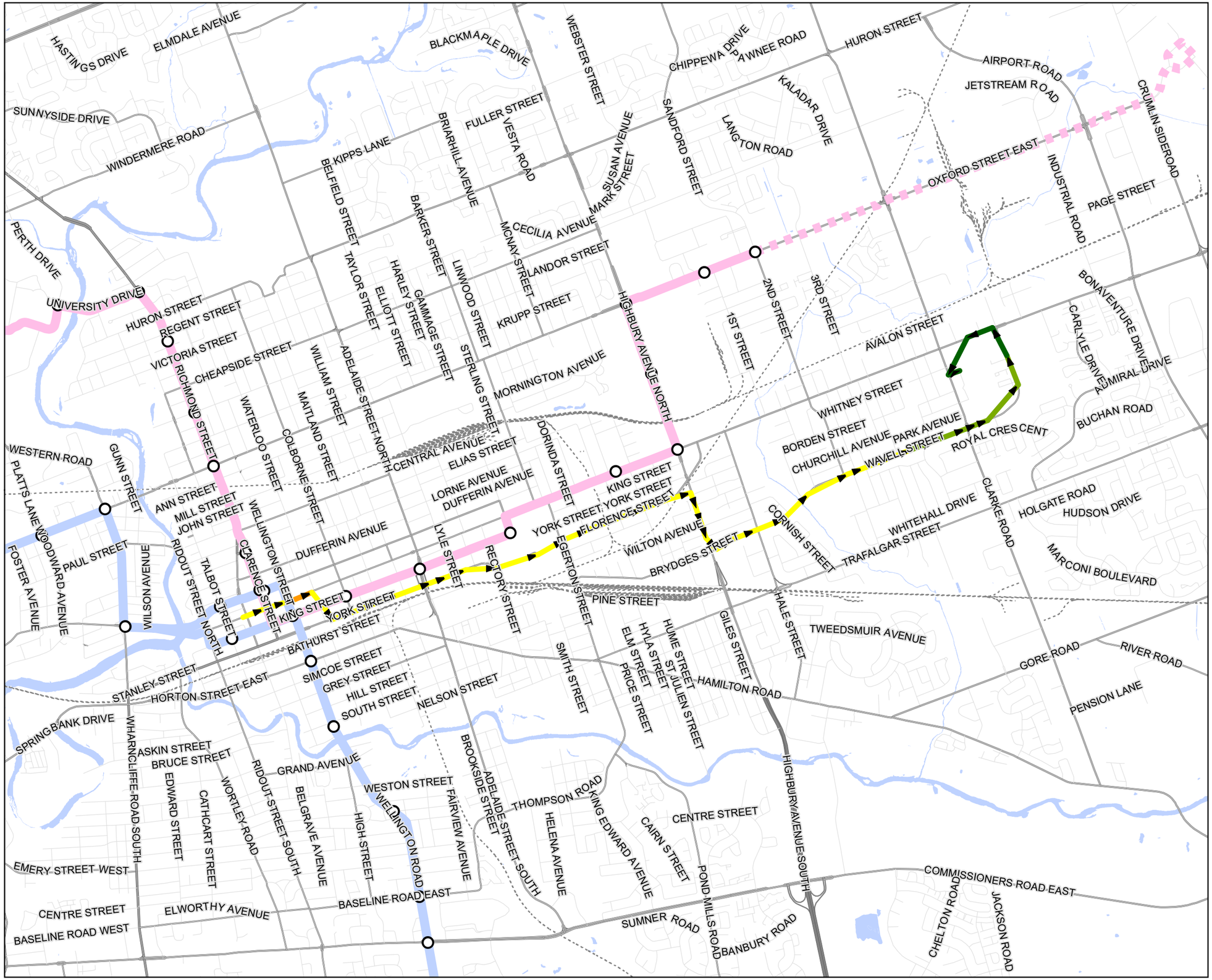


RAPID TRANSIT INTEGRATION REVIEW

2017 FALL PASSENGER PROFILE

Route: 7 Direction: 0
Period: WKD PM PEAK

Passenger Profile by Route Link

- 0 - 20
- 21 - 50
- 51 - 100
- 101 - 500
- 500+
- BRT Station
- Municipal Boundary
- North-East Route
- South-West Route
- Airport Extension
- South-West Route (Mixed Traffic)
- Railway
- Waterbody

0 0.5 1 km

N W E S

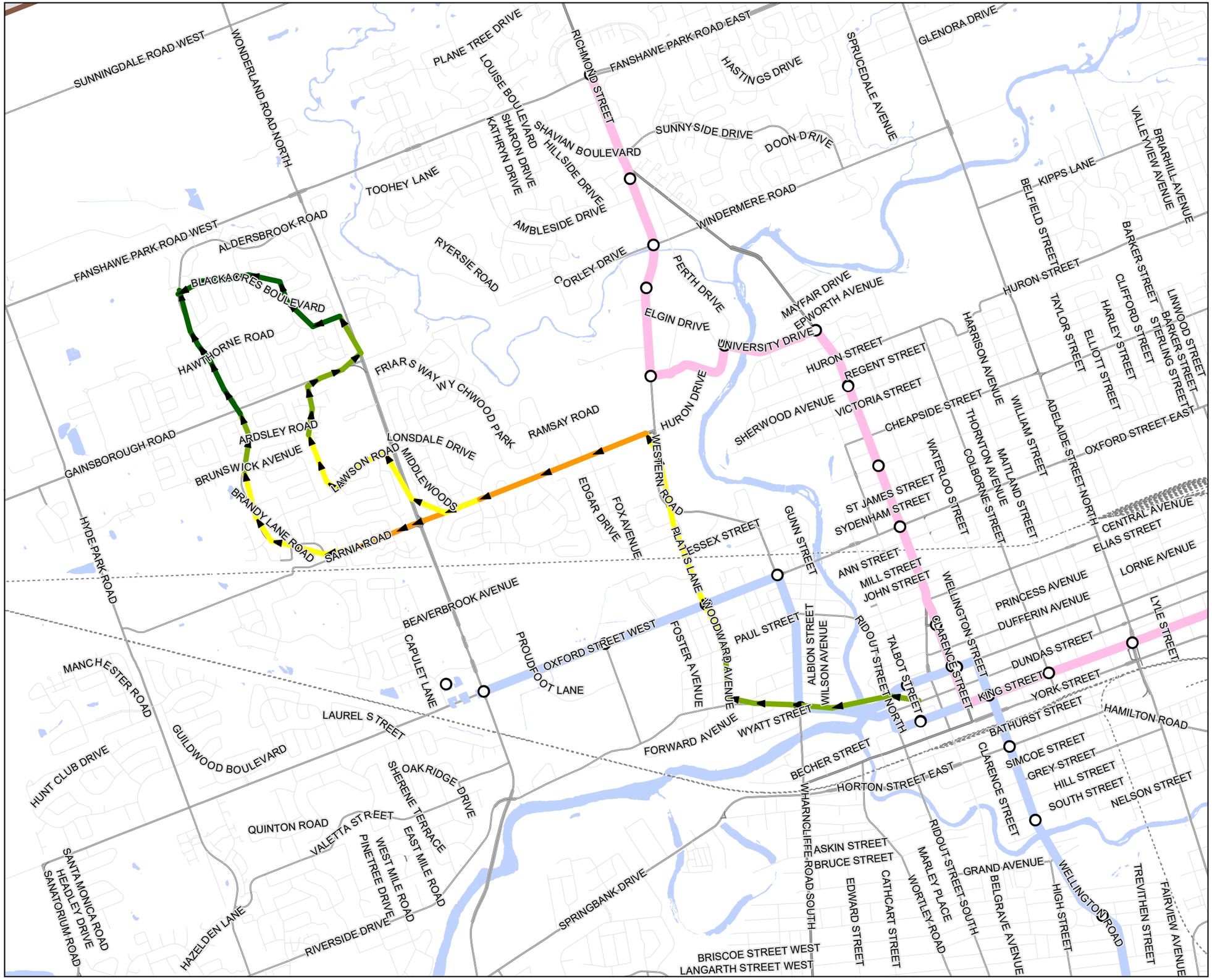
MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 188035
STATUS: FINAL
DATE: 2018-11-27



RAPID TRANSIT INTEGRATION REVIEW

2017 FALL PASSENGER PROFILE

Route: 9 Direction: 0
Period: WKD PM PEAK

Passenger Profile by Route Link

- 0 - 20
- 21 - 50
- 51 - 100
- 101 - 500
- 500+
- BRT Station
- Municipal Boundary
- North-East Route
- South-West Route
- Airport Extension
- South-West Route (Mixed Traffic)
- Railway
- Waterbody

0 0.5 1 km

N W E S

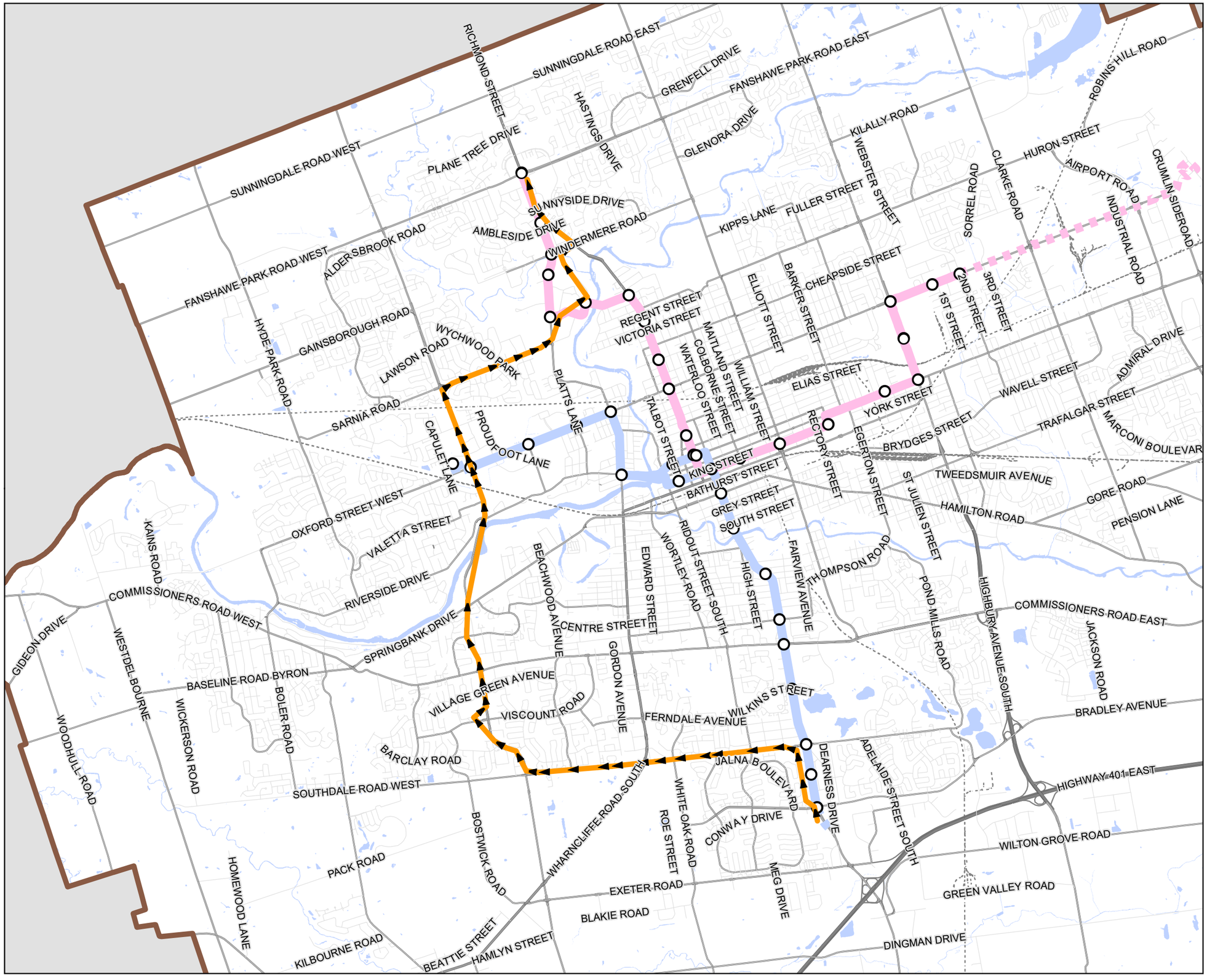
MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 188035
STATUS: FINAL
DATE: 2018-11-27



RAPID TRANSIT INTEGRATION REVIEW

2017 FALL PASSENGER PROFILE

Route: 10 Direction: 0
Period: WKD PM PEAK

Passenger Profile by Route Link

- 0 - 20
- 21 - 50
- 51 - 100
- 101 - 500
- 500+
- BRT Station
- Municipal Boundary
- North-East Route
- South-West Route
- Airport Extension
- South-West Route (Mixed Traffic)
- Railway
- Waterbody

0 0.5 1 km

N W E S

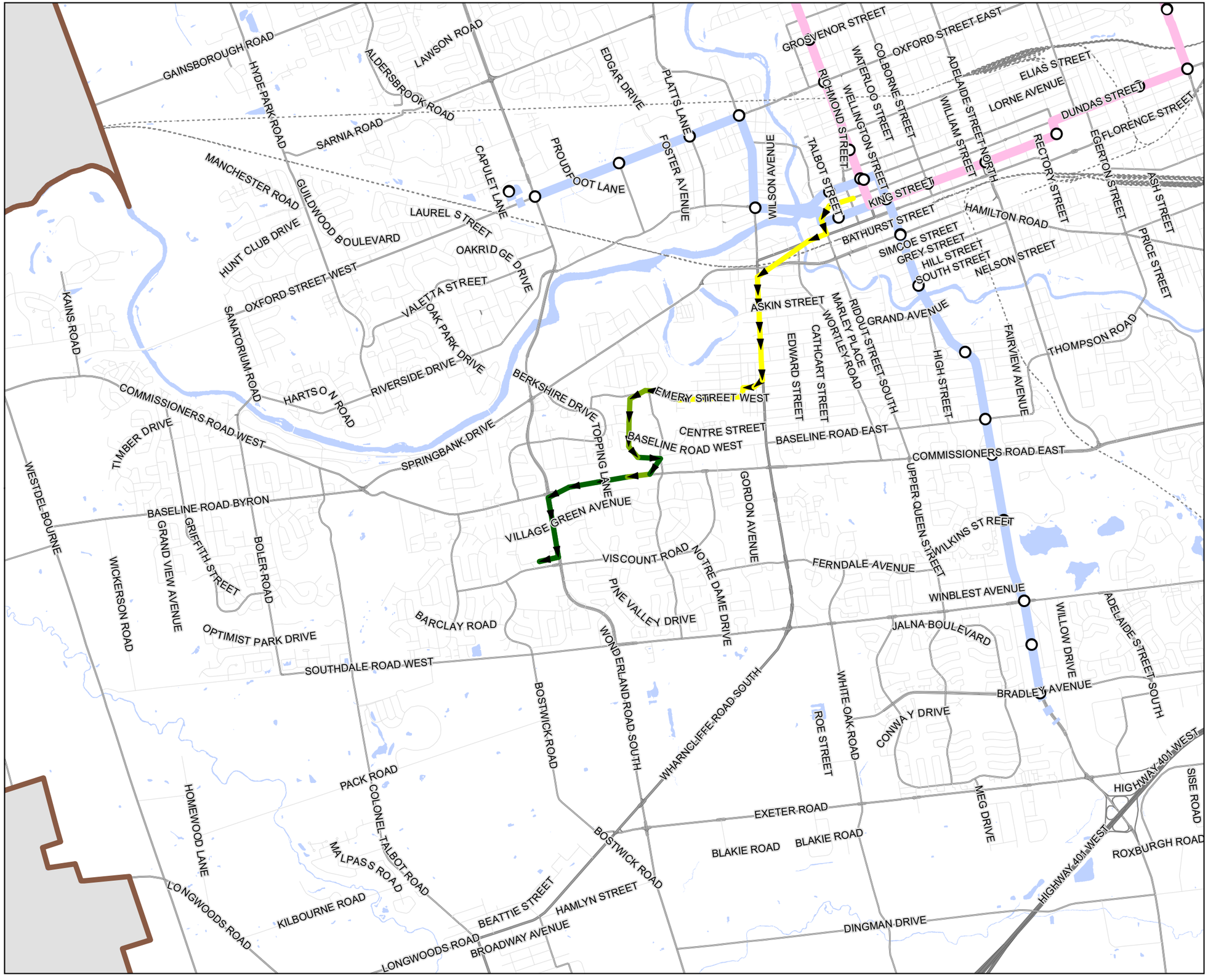
MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 188035
STATUS: FINAL
DATE: 2018-11-27



RAPID TRANSIT INTEGRATION REVIEW

2017 FALL PASSENGER PROFILE

Route: 11 Direction: 0
Period: WKD PM PEAK

Passenger Profile by Route Link

- 0 - 20
- 21 - 50
- 51 - 100
- 101 - 500
- 500+
- BRT Station
- Municipal Boundary
- North-East Route
- South-West Route
- Airport Extension
- South-West Route (Mixed Traffic)
- Railway
- Waterbody

0 0.5 1 km

N W E S

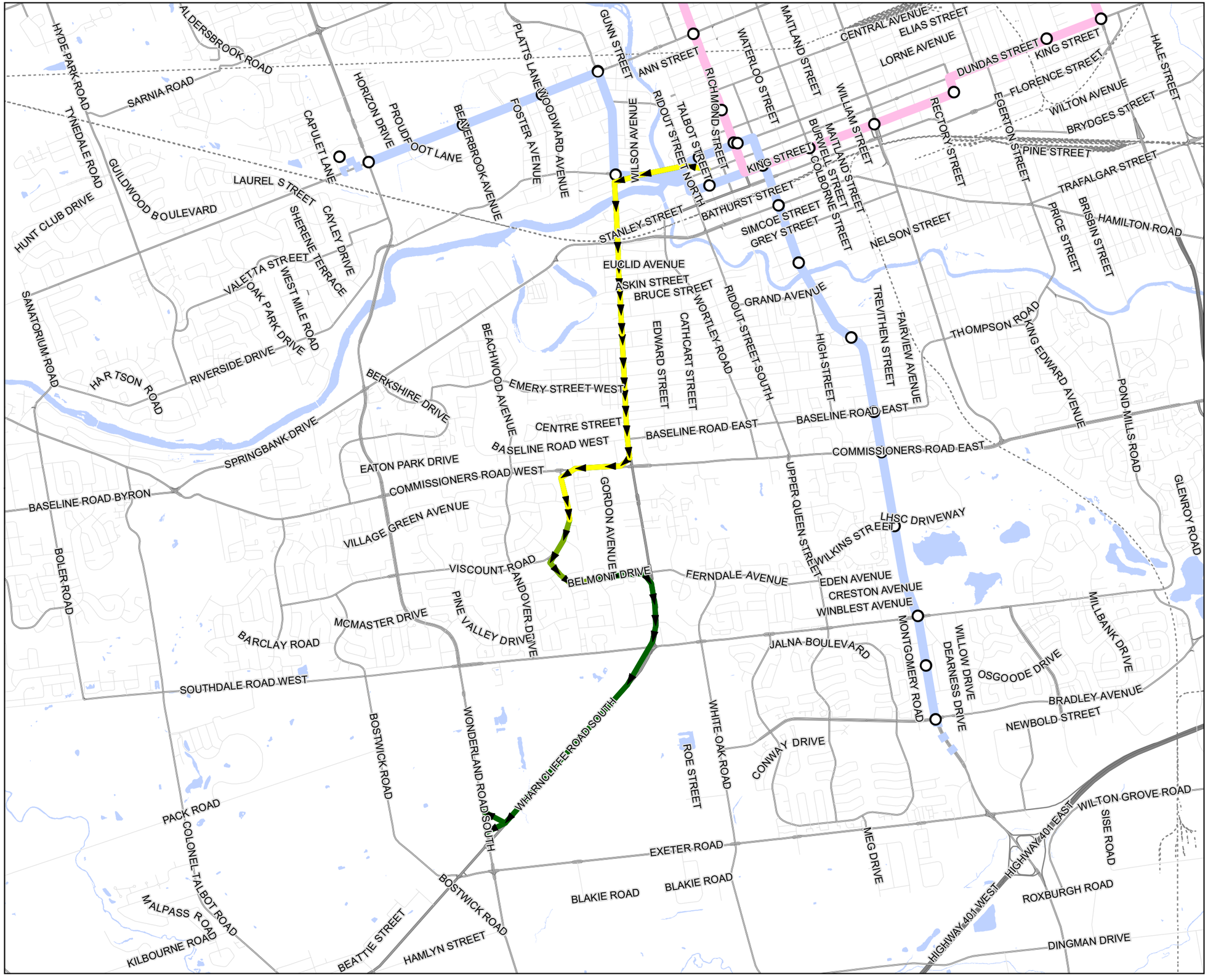
MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 188035
STATUS: FINAL
DATE: 2018-11-27



RAPID TRANSIT INTEGRATION REVIEW

2017 FALL PASSENGER PROFILE

Route: 12 Direction: 0
Period: WKD PM PEAK

Passenger Profile by Route Link

- 0 - 20
- 21 - 50
- 51 - 100
- 101 - 500
- 500+
- BRT Station
- Municipal Boundary
- North-East Route
- South-West Route
- Airport Extension
- South-West Route (Mixed Traffic)
- Railway
- Waterbody

0 0.5 1 km

N W E S

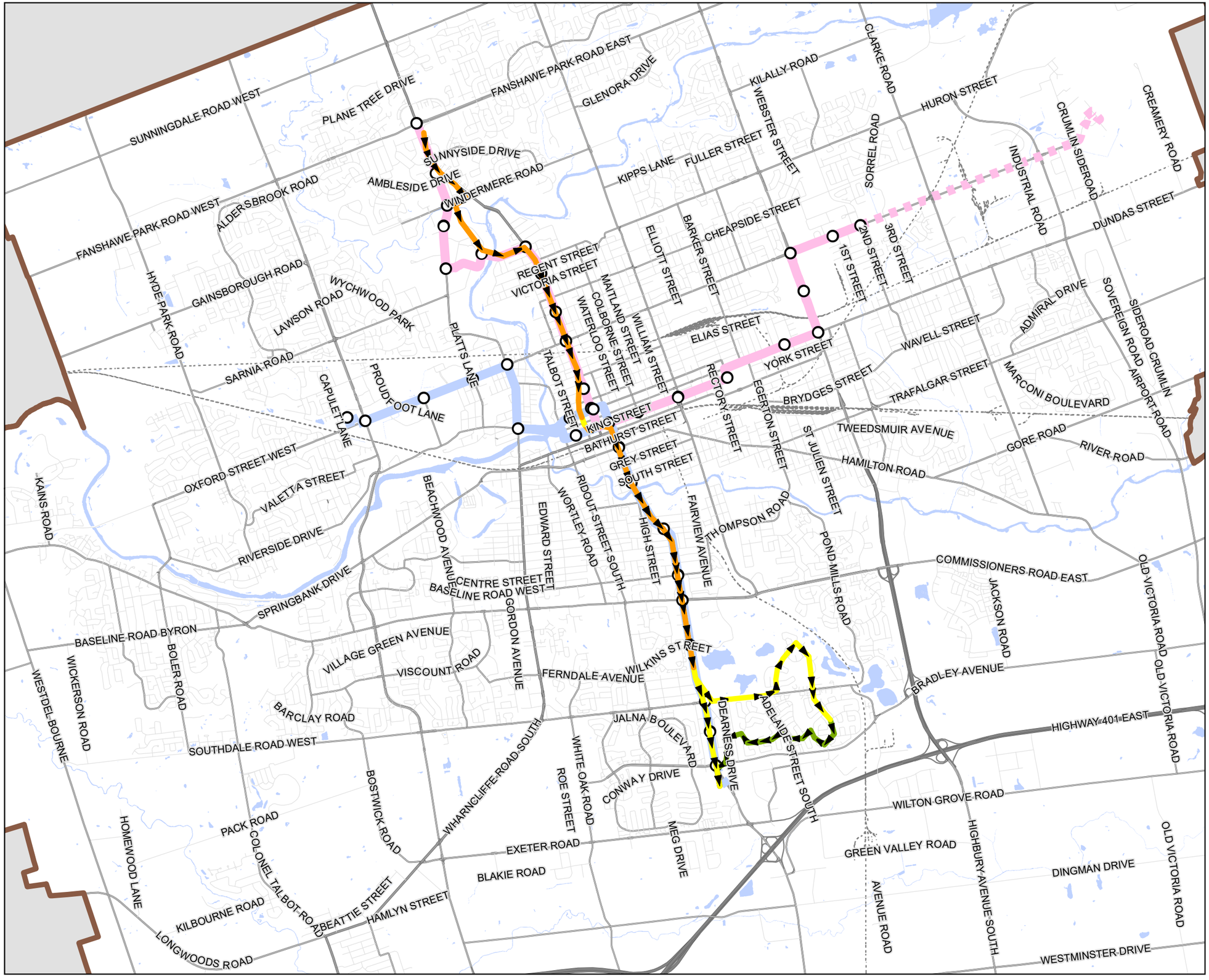
MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 188035
STATUS: FINAL
DATE: 2018-11-27



RAPID TRANSIT INTEGRATION REVIEW

2017 FALL PASSENGER PROFILE

Route: 13 Direction: 0
Period: WKD PM PEAK

Passenger Profile by Route Link

- 0 - 20
- 21 - 50
- 51 - 100
- 101 - 500
- 500+
- BRT Station
- Municipal Boundary
- North-East Route
- South-West Route
- Airport Extension
- South-West Route (Mixed Traffic)
- Railway
- Waterbody

0 0.5 1 km

N W E S

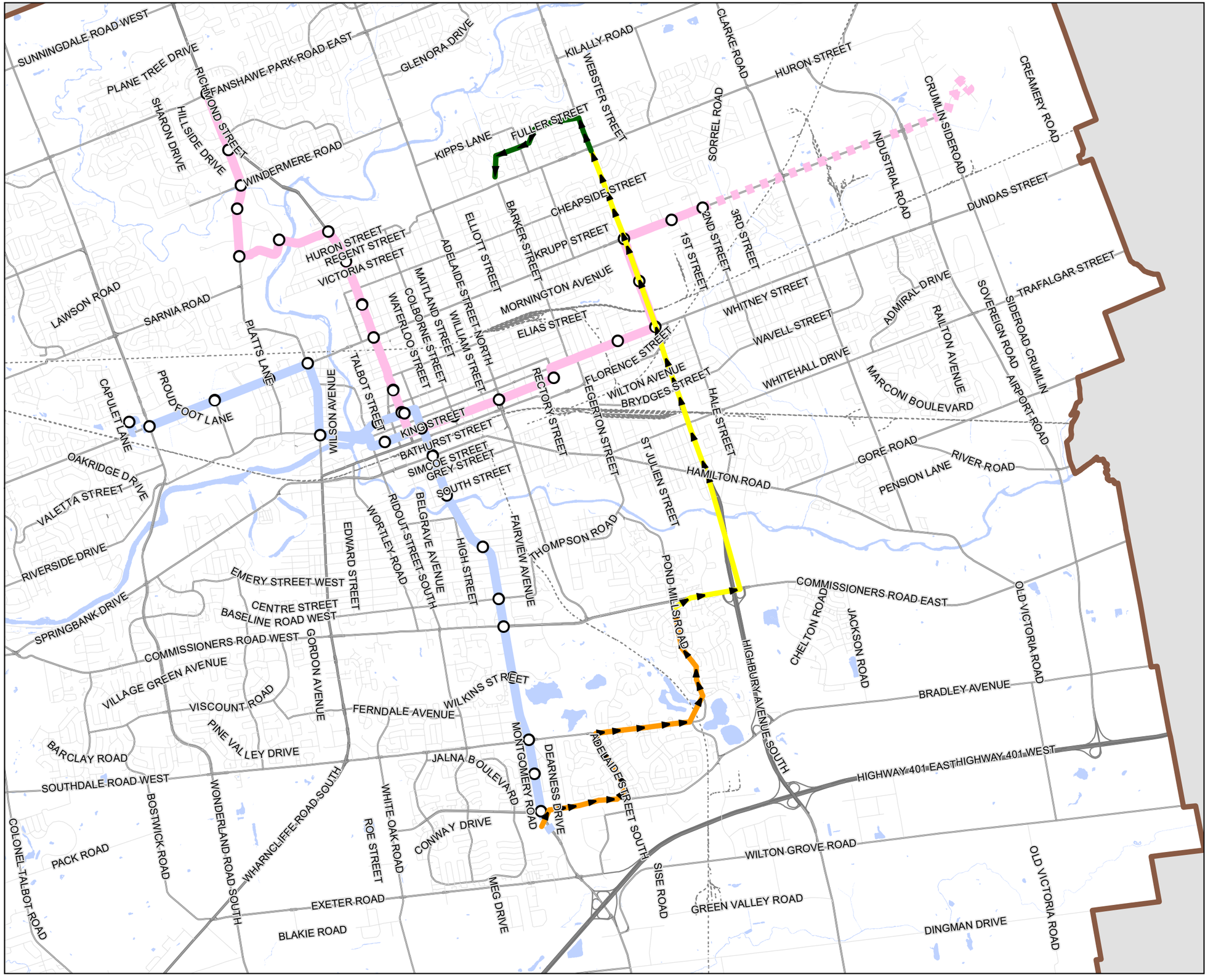
MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 188035
STATUS: FINAL
DATE: 2018-11-27



RAPID TRANSIT INTEGRATION REVIEW

2017 FALL PASSENGER PROFILE

Route: 14 Direction: 0
Period: WKD PM PEAK

Passenger Profile by Route Link

- 0 - 20
- 21 - 50
- 51 - 100
- 101 - 500
- 500+
- BRT Station
- Municipal Boundary
- North-East Route
- South-West Route
- Airport Extension
- South-West Route (Mixed Traffic)
- Railway
- Waterbody

0 0.5 1 km

N W E S

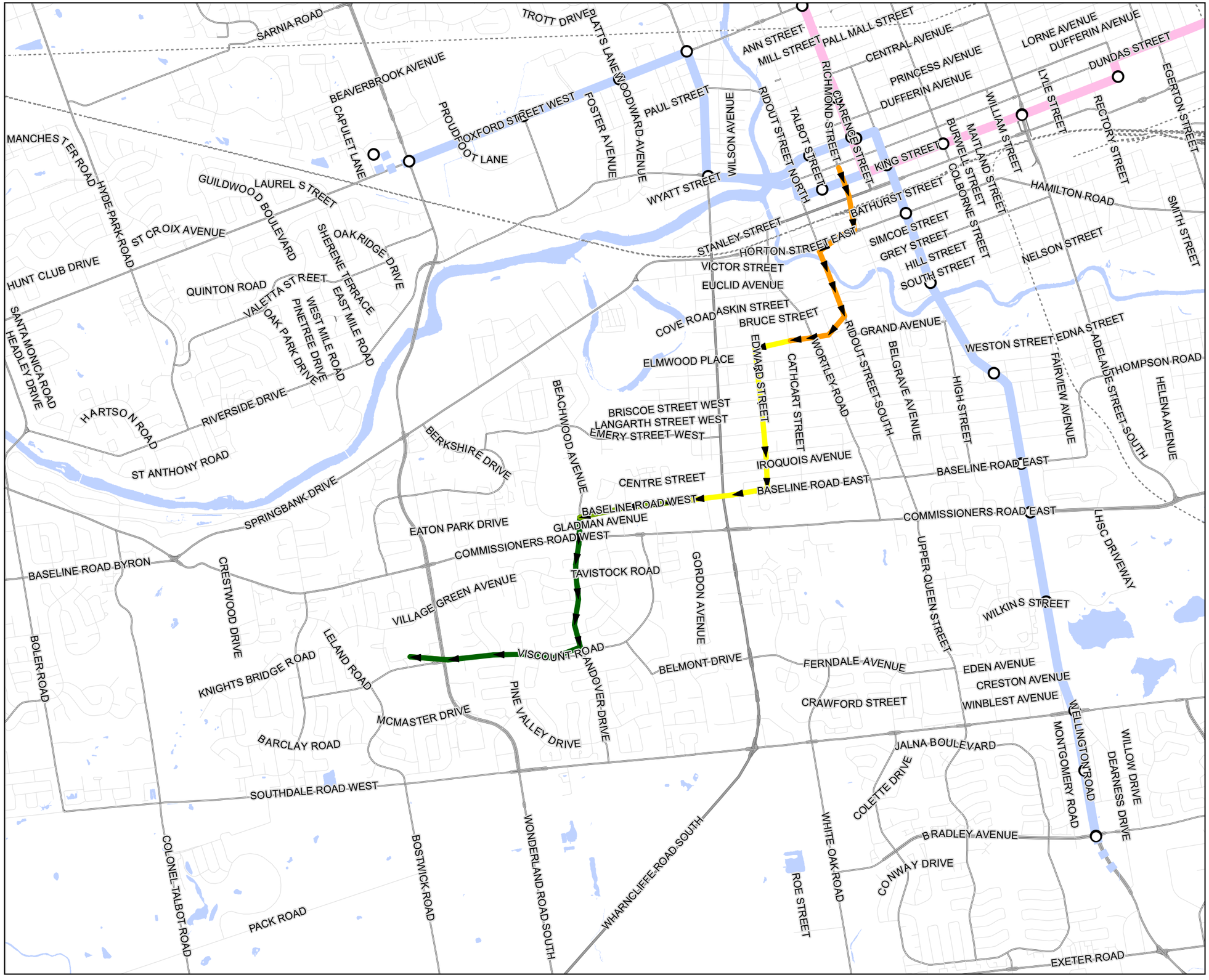
MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 188035
STATUS: FINAL
DATE: 2018-11-27



RAPID TRANSIT INTEGRATION REVIEW

2017 FALL PASSENGER PROFILE

Route: 15 Direction: 0
Period: WKD PM PEAK

Passenger Profile by Route Link

- 0 - 20
- 21 - 50
- 51 - 100
- 101 - 500
- 500+
- BRT Station
- Municipal Boundary
- North-East Route
- South-West Route
- Airport Extension
- South-West Route (Mixed Traffic)
- Railway
- Waterbody

0 0.5 1 km

N W E S

MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 188035
STATUS: FINAL
DATE: 2018-11-27

RAPID TRANSIT INTEGRATION REVIEW

2017 FALL PASSENGER PROFILE

Route: 16 Direction: 0
Period: WKD PM PEAK

Passenger Profile by Route Link

- 0 - 20
- 21 - 50
- 51 - 100
- 101 - 500
- 500+
- BRT Station
- Municipal Boundary
- North-East Route
- South-West Route
- Airport Extension
- South-West Route (Mixed Traffic)
- Railway
- Waterbody

0 0.5 1 km

N W E S

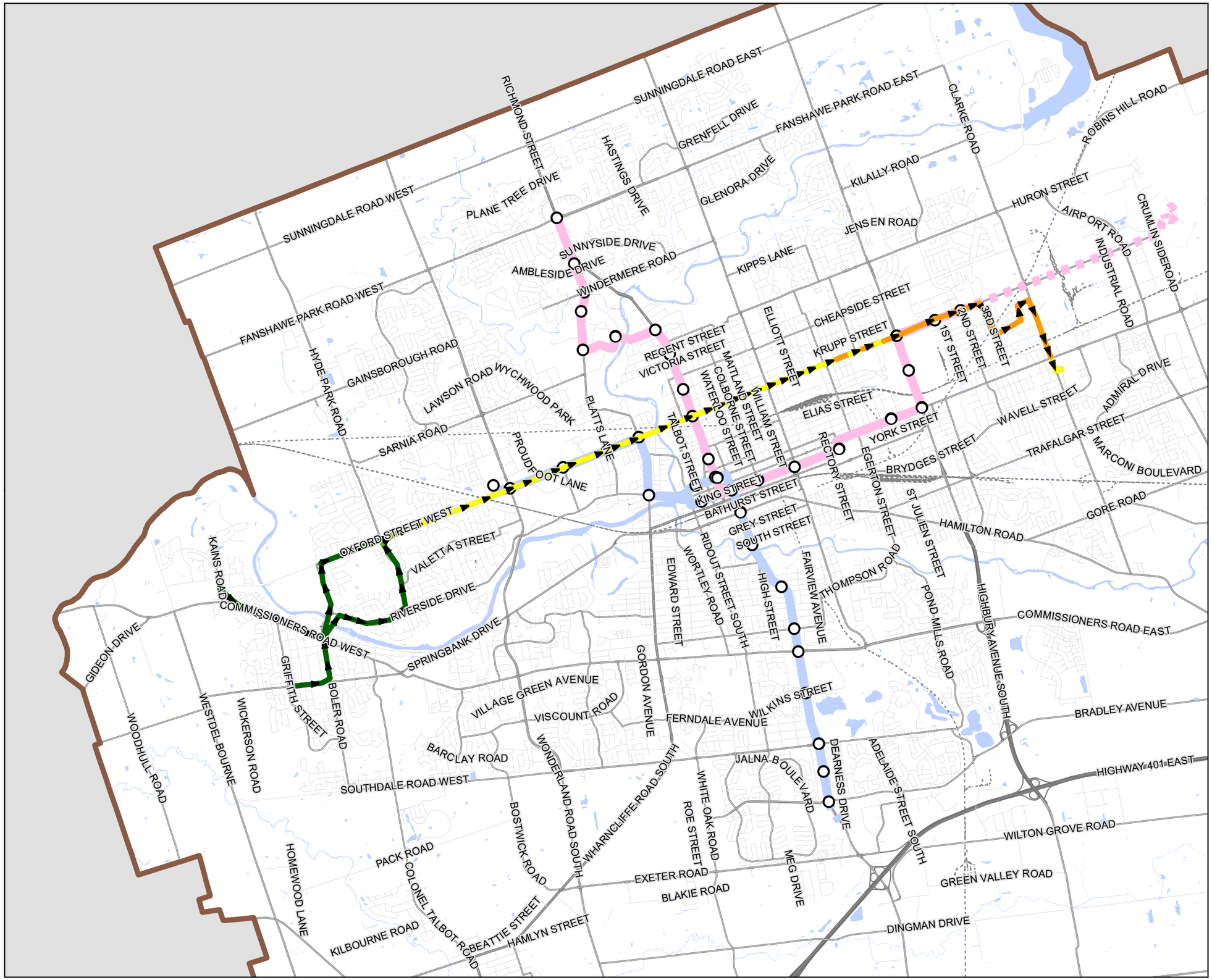
MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 188035
STATUS: FINAL
DATE: 2018-11-27



RAPID TRANSIT INTEGRATION REVIEW

2017 FALL PASSENGER PROFILE

Route: 17 Direction: 0
Period: WKD PM PEAK

Passenger Profile by Route Link

- 0 - 20
- 21 - 50
- 51 - 100
- 101 - 500
- 500+
- BRT Station
- Municipal Boundary
- North-East Route
- South-West Route
- Airport Extension
- South-West Route (Mixed Traffic)
- Railway
- Waterbody

0 0.5 1 km

N W E S

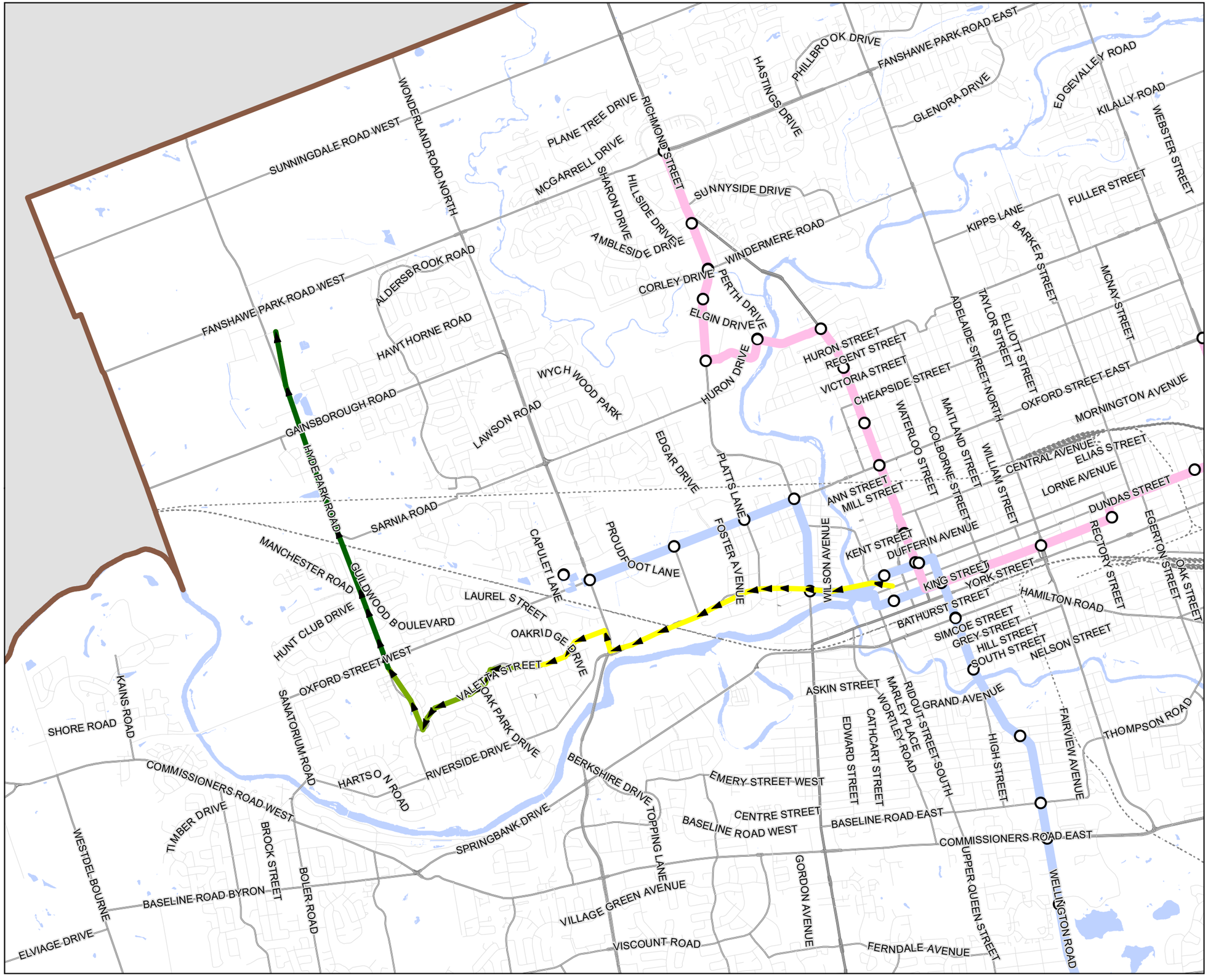
MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 188035
STATUS: FINAL
DATE: 2018-11-27



RAPID TRANSIT INTEGRATION REVIEW

2017 FALL PASSENGER PROFILE

Route: 19 Direction: 0
Period: WKD PM PEAK

Passenger Profile by Route Link

- 0 - 20
- 21 - 50
- 51 - 100
- 101 - 500
- 500+
- BRT Station
- Municipal Boundary
- North-East Route
- South-West Route
- Airport Extension
- South-West Route (Mixed Traffic)
- Railway
- Waterbody

0 0.5 1 km

MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 188035
STATUS: FINAL
DATE: 2018-11-27

RAPID TRANSIT INTEGRATION REVIEW

2017 FALL PASSENGER PROFILE

Route: 20 Direction: 0
Period: WKD PM PEAK

Passenger Profile by Route Link

- 0 - 20
- 21 - 50
- 51 - 100
- 101 - 500
- 500+
- BRT Station
- Municipal Boundary
- North-East Route
- South-West Route
- Airport Extension
- South-West Route (Mixed Traffic)
- Railway
- Waterbody

0 0.5 1 km

N W E S

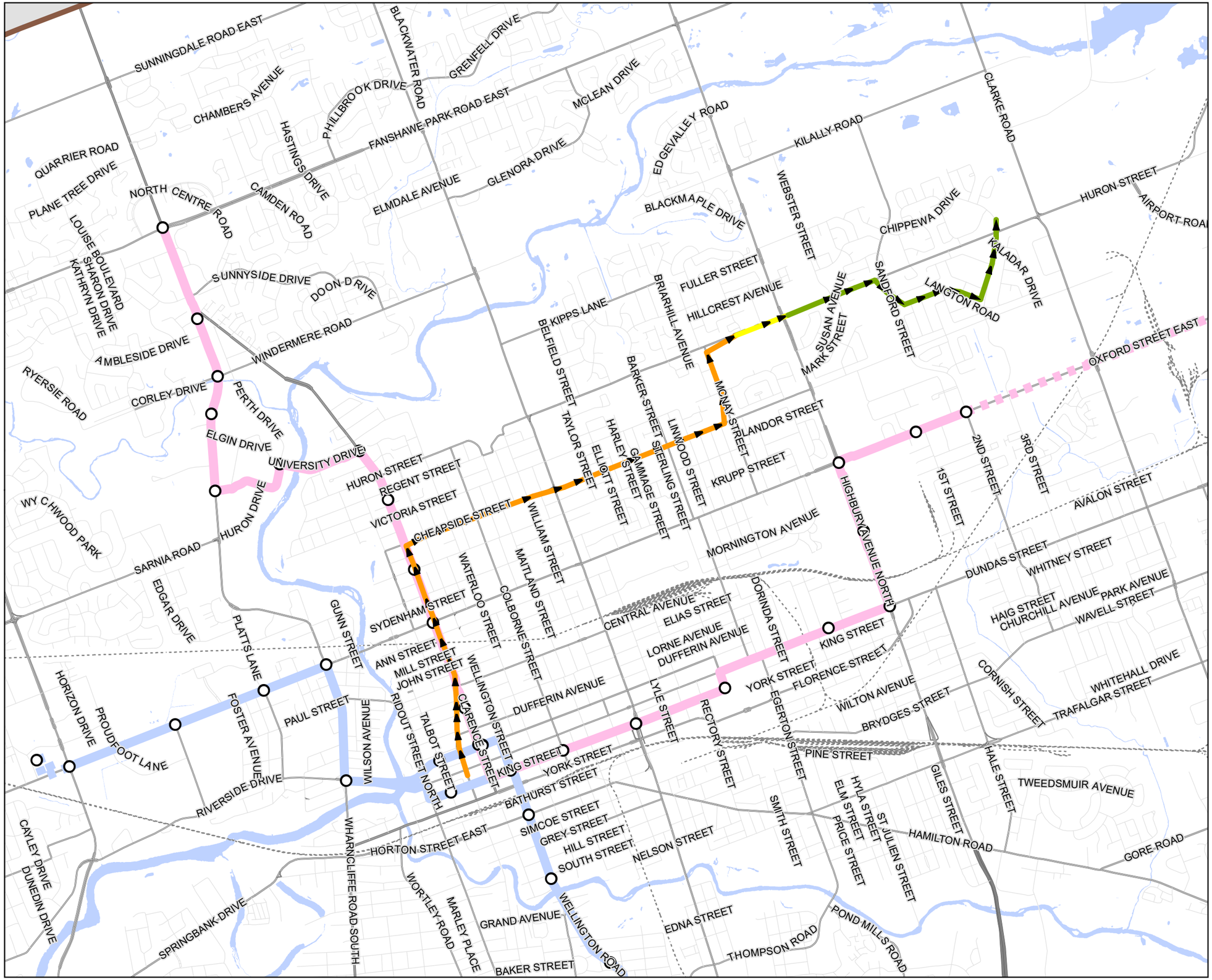
MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 188035
STATUS: FINAL
DATE: 2018-11-27



RAPID TRANSIT INTEGRATION REVIEW

2017 FALL PASSENGER PROFILE

Route: 21 Direction: 0
Period: WKD PM PEAK

Passenger Profile by Route Link

- 0 - 20
- 21 - 50
- 51 - 100
- 101 - 500
- 500+
- BRT Station
- Municipal Boundary
- North-East Route
- South-West Route
- Airport Extension
- South-West Route (Mixed Traffic)
- Railway
- Waterbody

0 0.5 1 km

N W E S

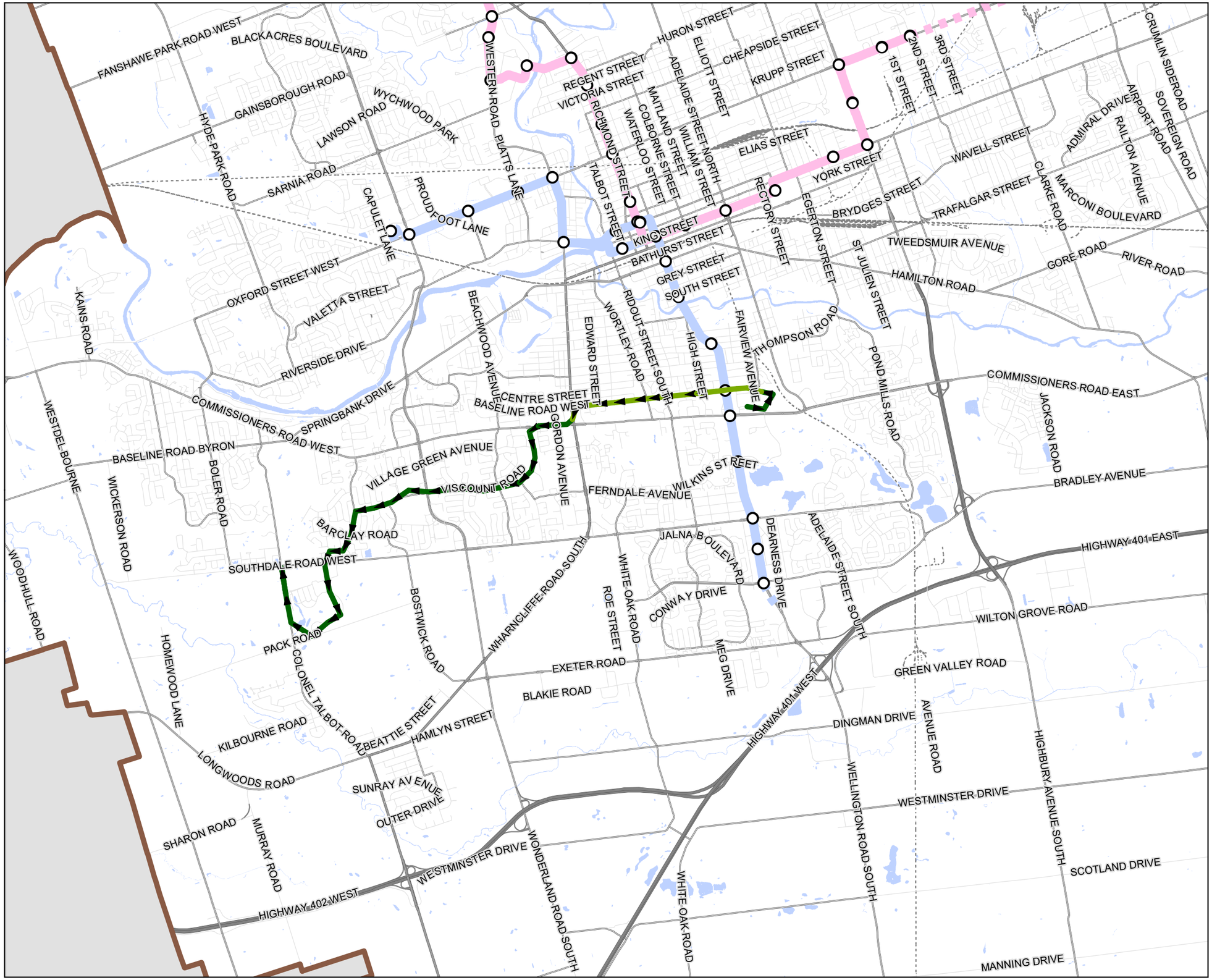
MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 188035
STATUS: FINAL
DATE: 2018-11-27



RAPID TRANSIT INTEGRATION REVIEW

2017 FALL PASSENGER PROFILE

Route: 24 Direction: 0
Period: WKD PM PEAK

Passenger Profile by Route Link

- 0 - 20
- 21 - 50
- 51 - 100
- 101 - 500
- 500+
- BRT Station
- Municipal Boundary
- North-East Route
- South-West Route
- Airport Extension
- South-West Route (Mixed Traffic)
- Railway
- Waterbody

0 0.5 1 km

N W E S

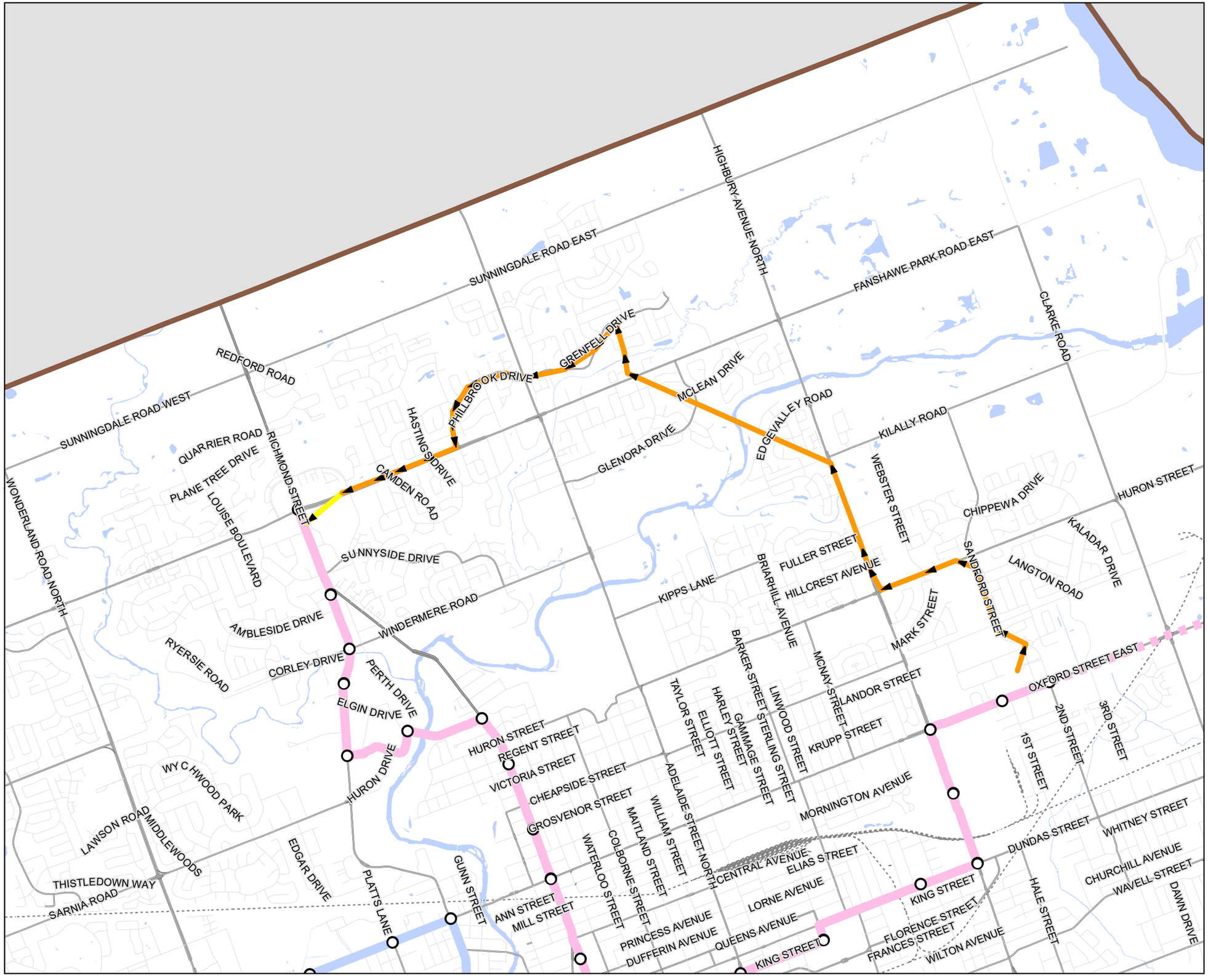
MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 188035
STATUS: FINAL
DATE: 2018-11-27



RAPID TRANSIT INTEGRATION REVIEW

2017 FALL PASSENGER PROFILE

Route: 25 Direction: 0
Period: WKD PM PEAK

Passenger Profile by Route Link

- 0 - 20
- 21 - 50
- 51 - 100
- 101 - 500
- 500+
- BRT Station
- Municipal Boundary
- North-East Route
- South-West Route
- Airport Extension
- South-West Route (Mixed Traffic)
- Railway
- Waterbody

0 0.5 1 km

N W E S

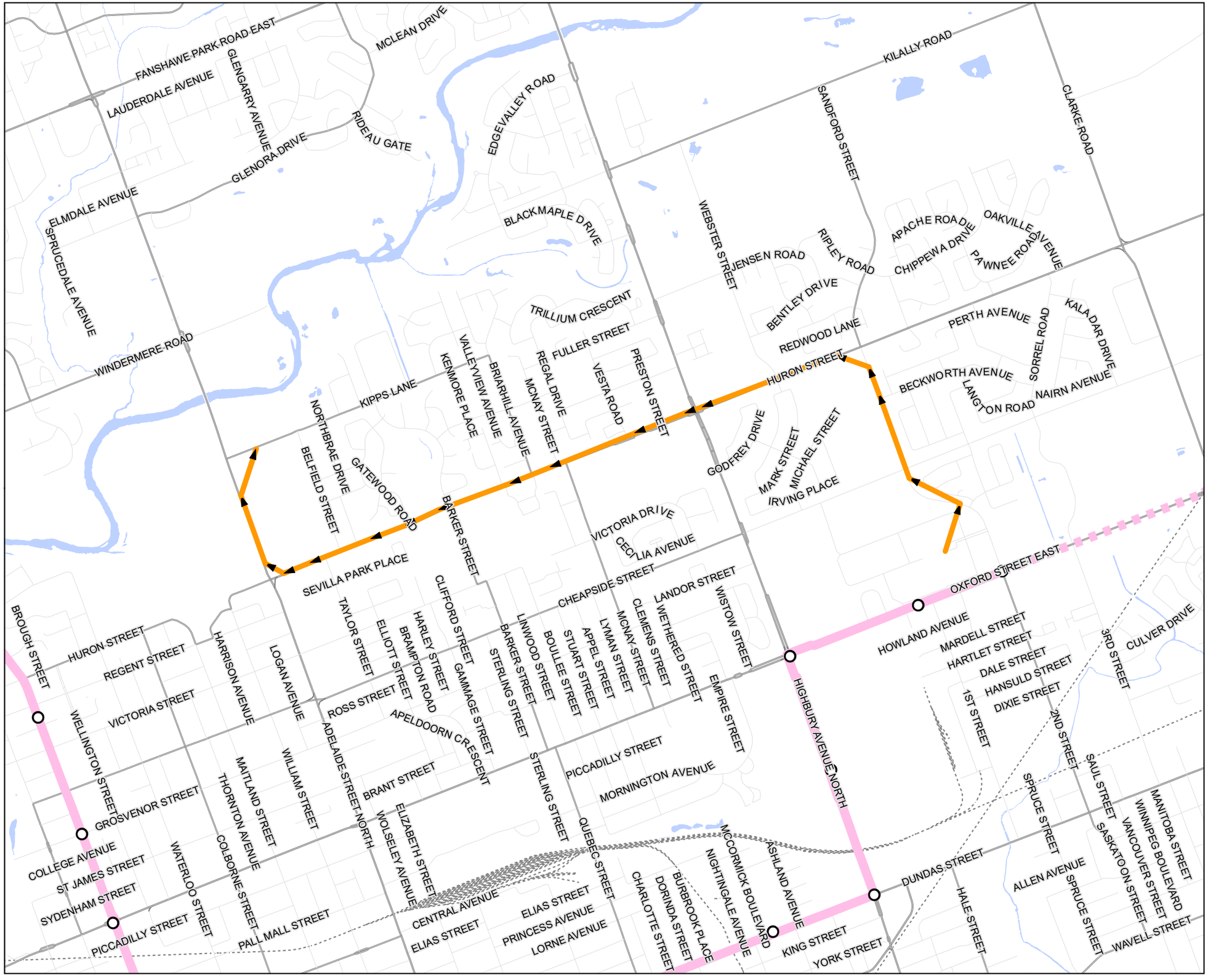
MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 188035
STATUS: FINAL
DATE: 2018-11-27



RAPID TRANSIT INTEGRATION REVIEW

2017 FALL PASSENGER PROFILE

Route: 27 Direction: 0
Period: WKD PM PEAK

Passenger Profile by Route Link

- 0 - 20
- 21 - 50
- 51 - 100
- 101 - 500
- 500+
- BRT Station
- Municipal Boundary
- North-East Route
- South-West Route
- Airport Extension
- South-West Route (Mixed Traffic)
- Railway
- Waterbody

0 0.5 1 km

N W E S

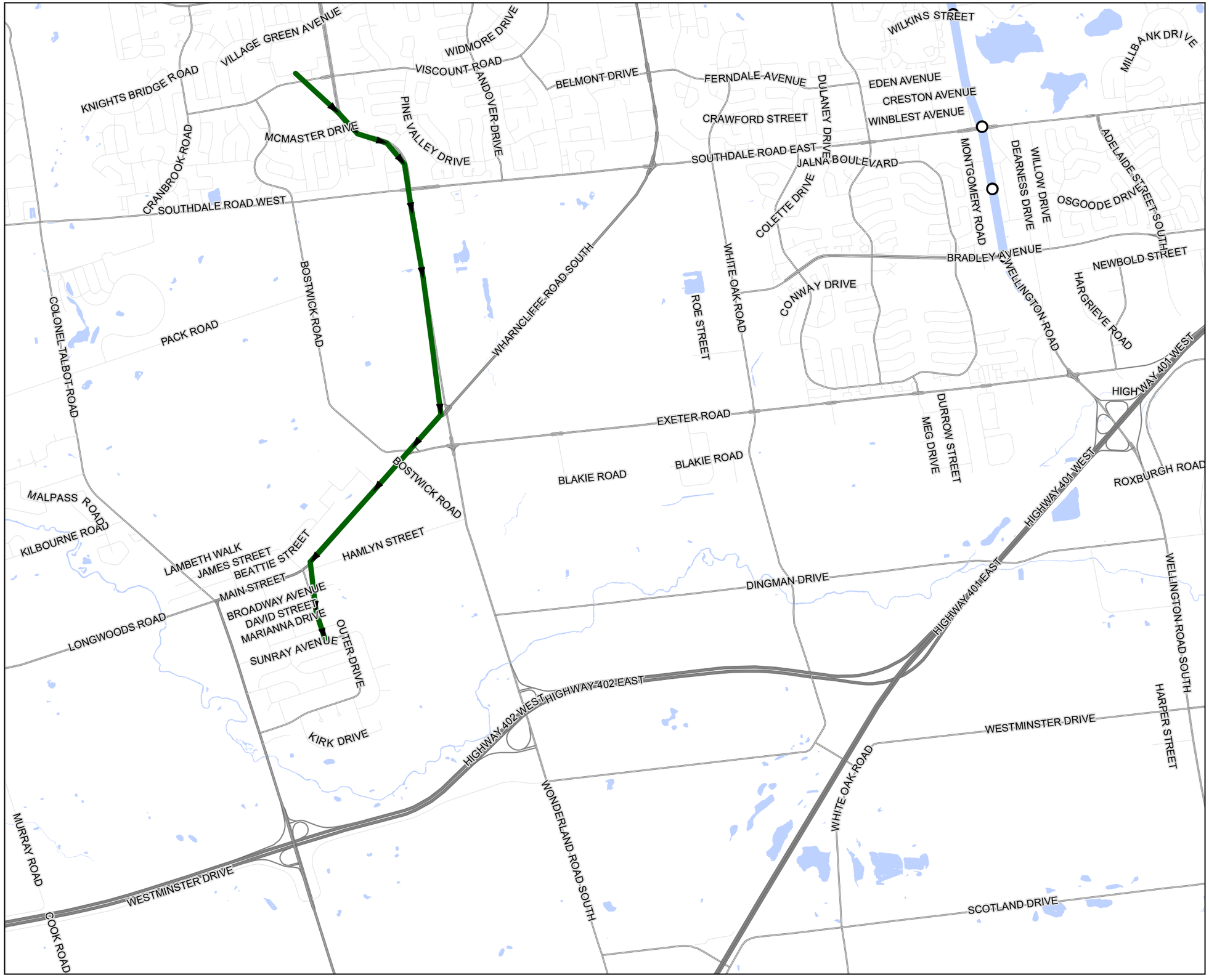
MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 188035
STATUS: FINAL
DATE: 2018-11-27



RAPID TRANSIT INTEGRATION REVIEW

2017 FALL PASSENGER PROFILE

Route: 28 Direction: 0
Period: WKD PM PEAK

Passenger Profile by Route Link

- 0 - 20
- 21 - 50
- 51 - 100
- 101 - 500
- 500+
- BRT Station
- Municipal Boundary
- North-East Route
- South-West Route
- Airport Extension
- South-West Route (Mixed Traffic)
- Railway
- Waterbody

0 0.5 1 km

N W E S

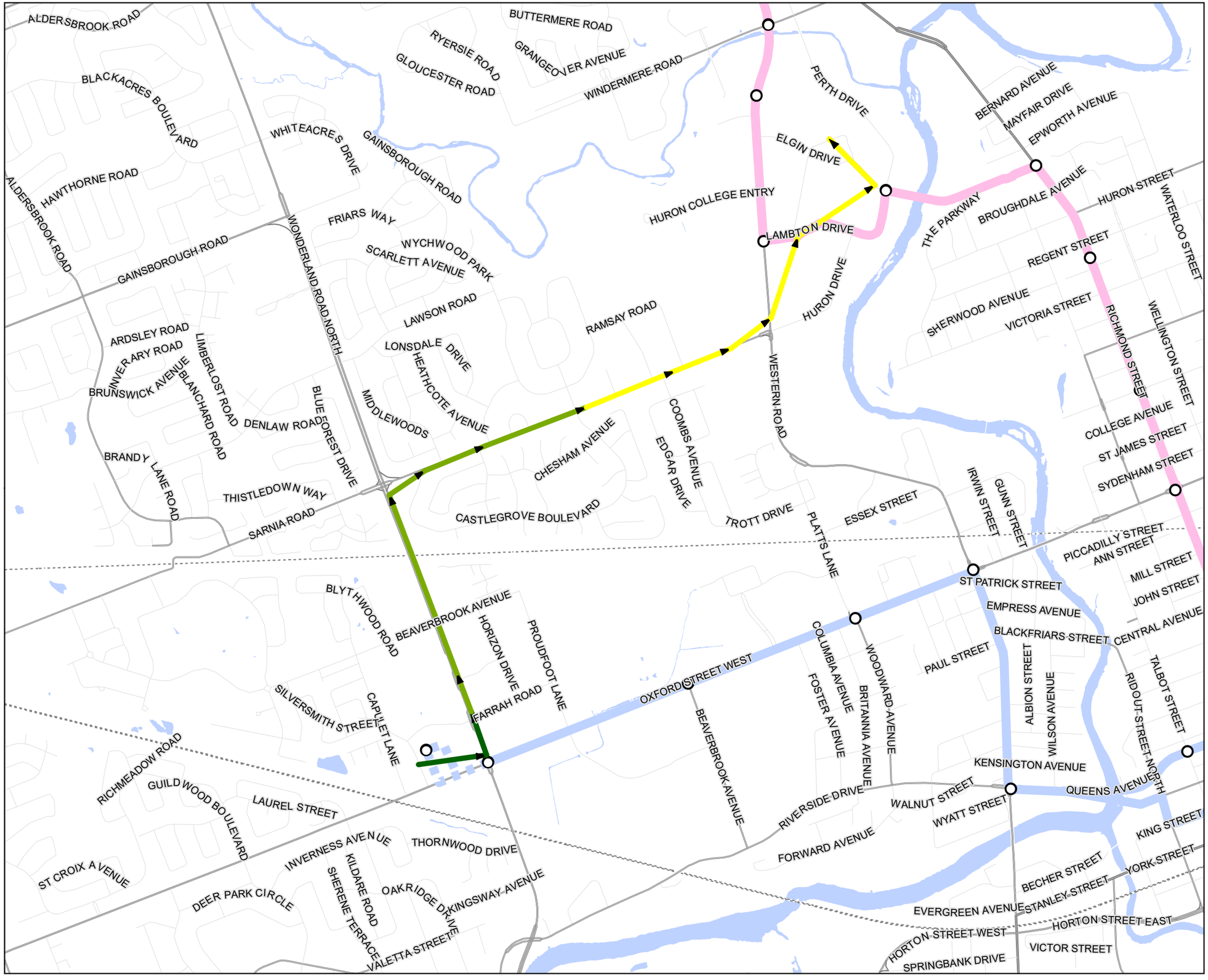
MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 188035
STATUS: FINAL
DATE: 2018-11-27



RAPID TRANSIT INTEGRATION REVIEW

2017 FALL PASSENGER PROFILE

Route: 29 Direction: 0
Period: WKD PM PEAK

Passenger Profile by Route Link

- 0 - 20
- 21 - 50
- 51 - 100
- 101 - 500
- 500+
- BRT Station
- Municipal Boundary
- North-East Route
- South-West Route
- Airport Extension
- South-West Route (Mixed Traffic)
- Railway
- Waterbody

0 0.5 1 km

N W E S

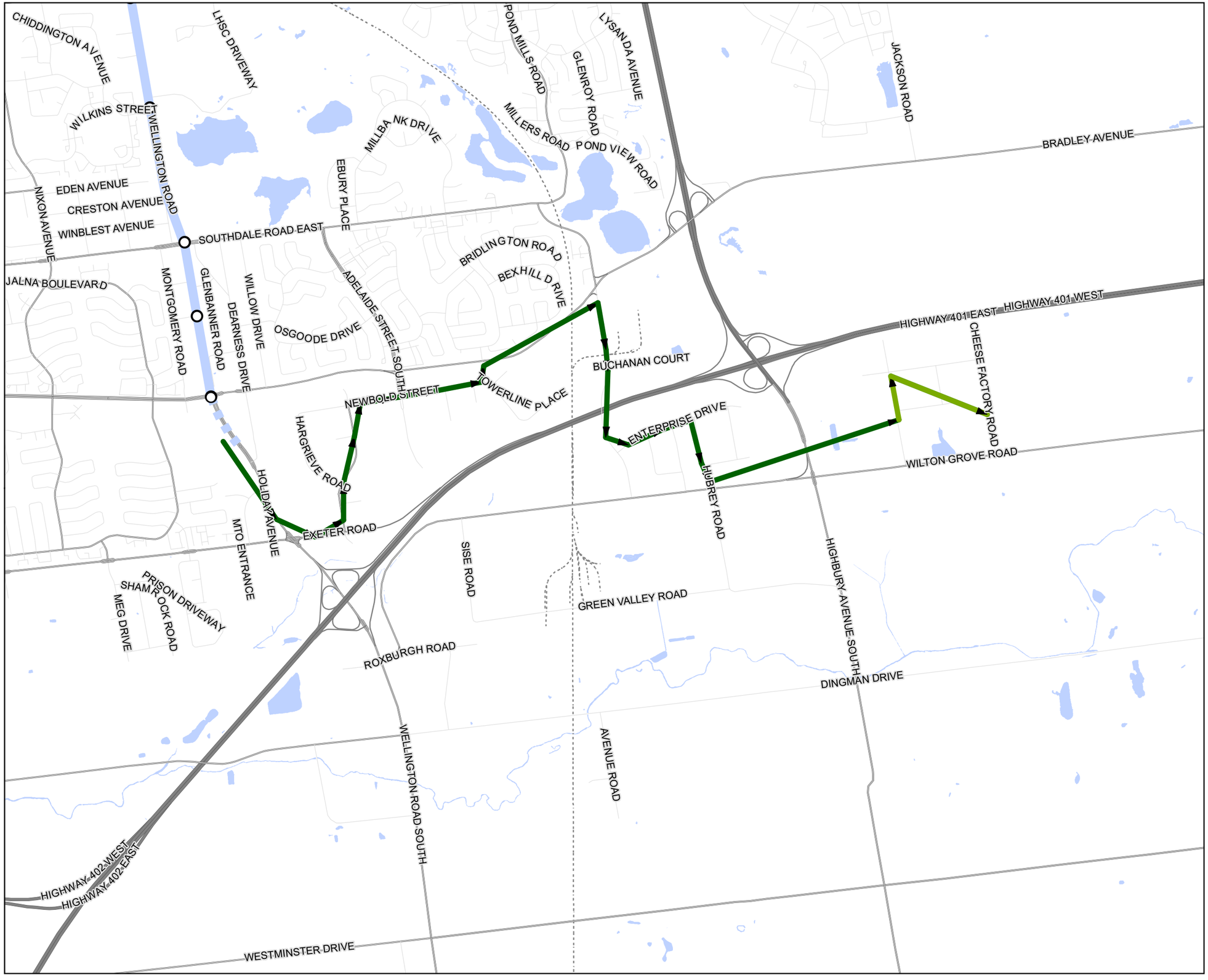
MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 188035
STATUS: FINAL
DATE: 2018-11-27



RAPID TRANSIT INTEGRATION REVIEW

2017 FALL PASSENGER PROFILE

Route: 30 Direction: 0
Period: WKD PM PEAK

Passenger Profile by Route Link

- 0 - 20
- 21 - 50
- 51 - 100
- 101 - 500
- 500+
- BRT Station
- Municipal Boundary
- North-East Route
- South-West Route
- Airport Extension
- South-West Route (Mixed Traffic)
- Railway
- Waterbody

0 0.5 1 km

N W E S

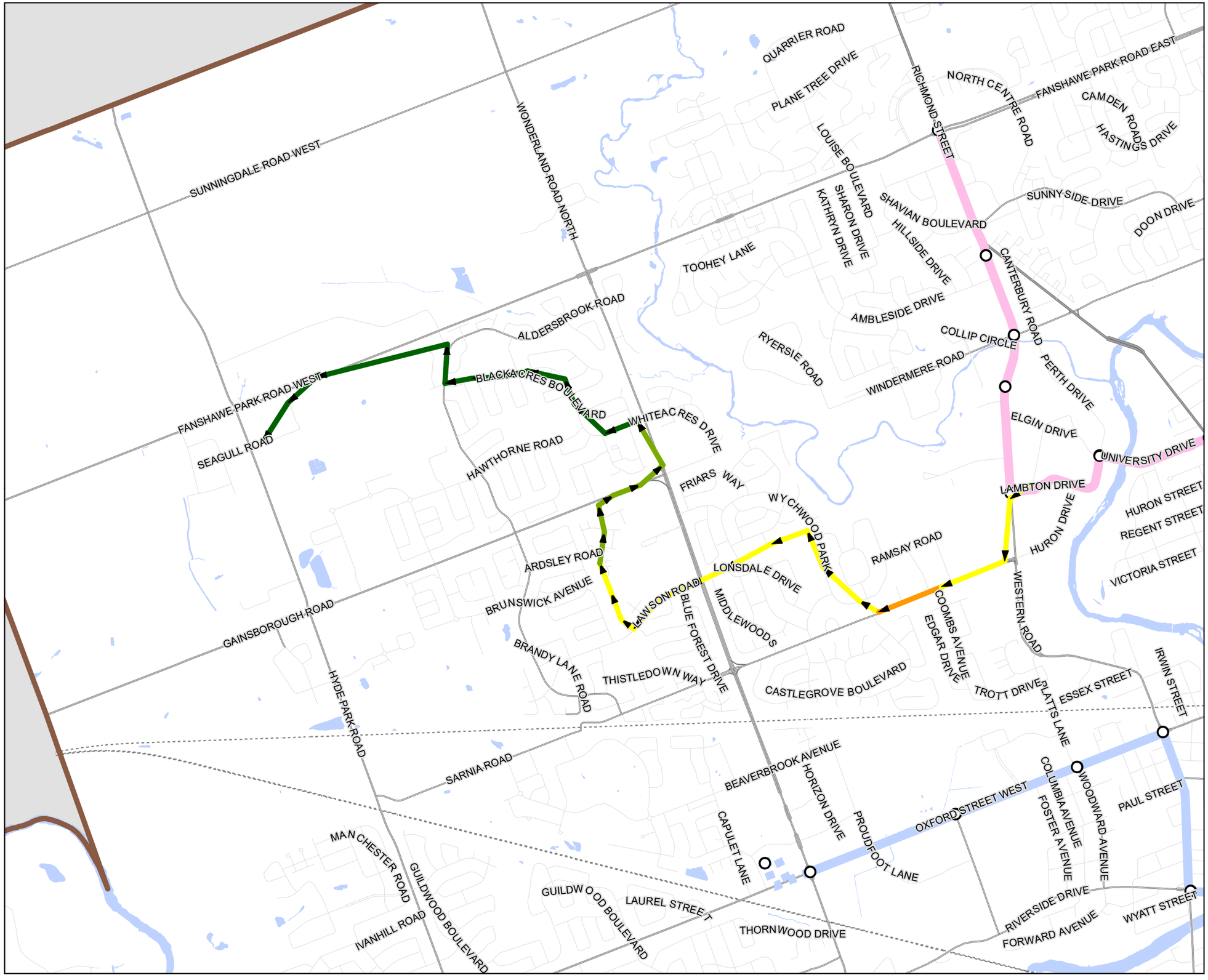
MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 188035
STATUS: FINAL
DATE: 2018-11-27



RAPID TRANSIT INTEGRATION REVIEW

2017 FALL PASSENGER PROFILE

Route: 31 Direction: 0
Period: WKD PM PEAK

Passenger Profile by Route Link

- 0 - 20
- 21 - 50
- 51 - 100
- 101 - 500
- 500+
- BRT Station
- Municipal Boundary
- North-East Route
- South-West Route
- Airport Extension
- South-West Route (Mixed Traffic)
- Railway
- Waterbody

0 0.5 1 km

N W E S

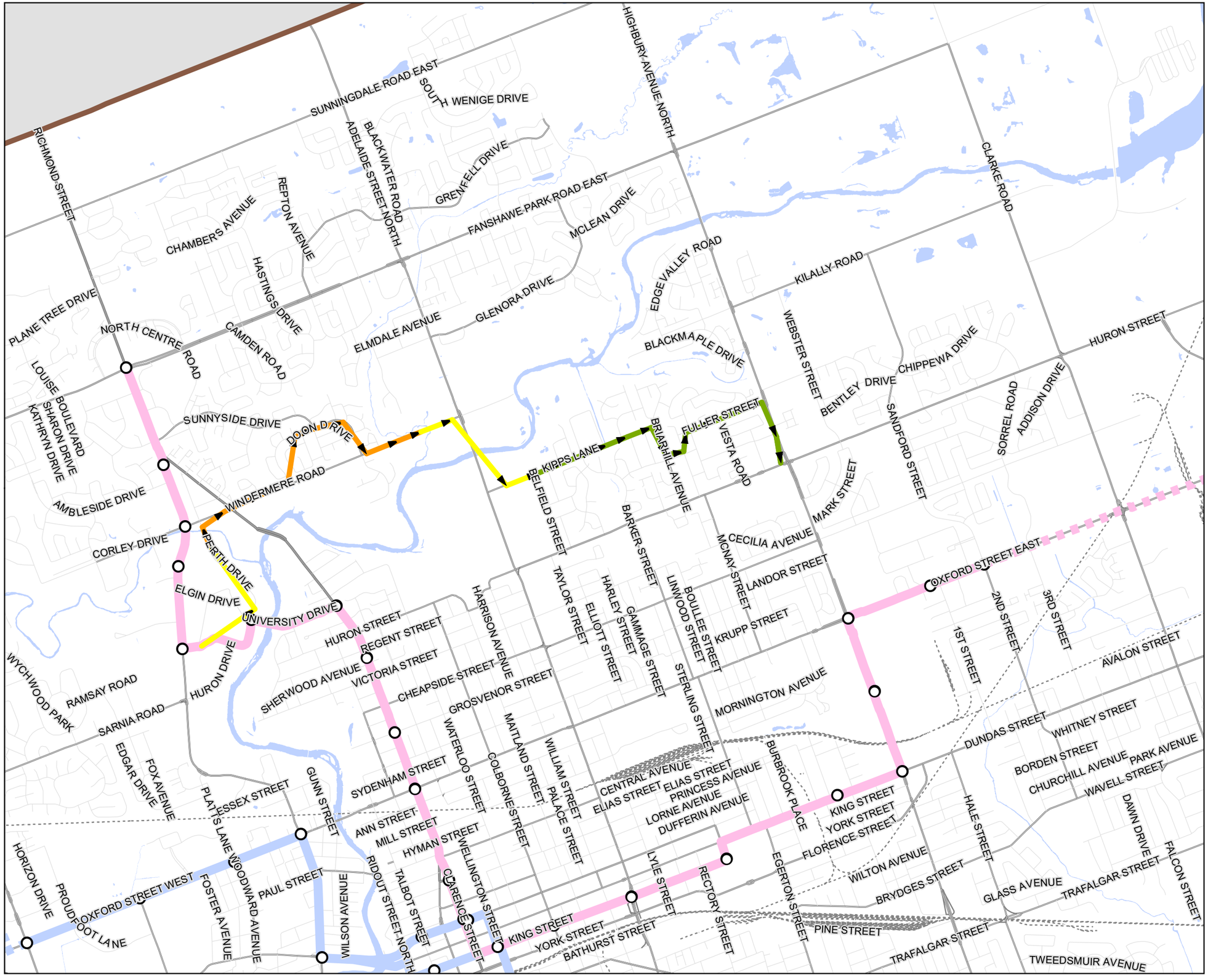
MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 188035
STATUS: FINAL
DATE: 2018-11-27



RAPID TRANSIT INTEGRATION REVIEW

2017 FALL PASSENGER PROFILE

Route: 32 Direction: 0
Period: WKD PM PEAK

Passenger Profile by Route Link

- 0 - 20
- 21 - 50
- 51 - 100
- 101 - 500
- 500+
- BRT Station
- Municipal Boundary
- North-East Route
- South-West Route
- Airport Extension
- South-West Route (Mixed Traffic)
- Railway
- Waterbody

0 0.5 1 km

N W E S

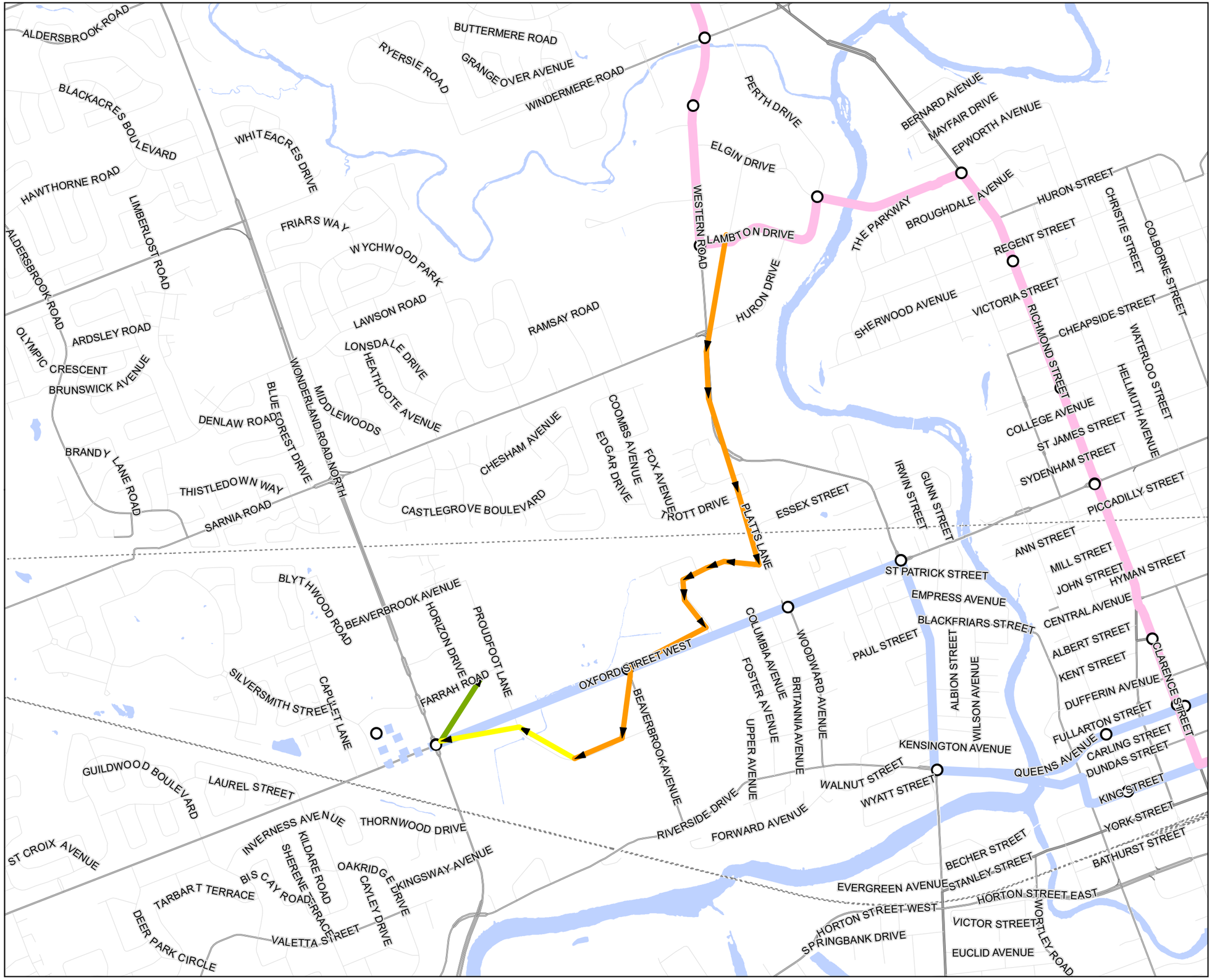
MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 188035
STATUS: FINAL
DATE: 2018-11-27



RAPID TRANSIT INTEGRATION REVIEW

2017 FALL PASSENGER PROFILE

Route: 33 Direction: 0
Period: WKD PM PEAK

Passenger Profile by Route Link

- 0 - 20
- 21 - 50
- 51 - 100
- 101 - 500
- 500+
- BRT Station
- Municipal Boundary
- North-East Route
- South-West Route
- Airport Extension
- South-West Route (Mixed Traffic)
- Railway
- Waterbody

0 0.5 1 km

N W E S

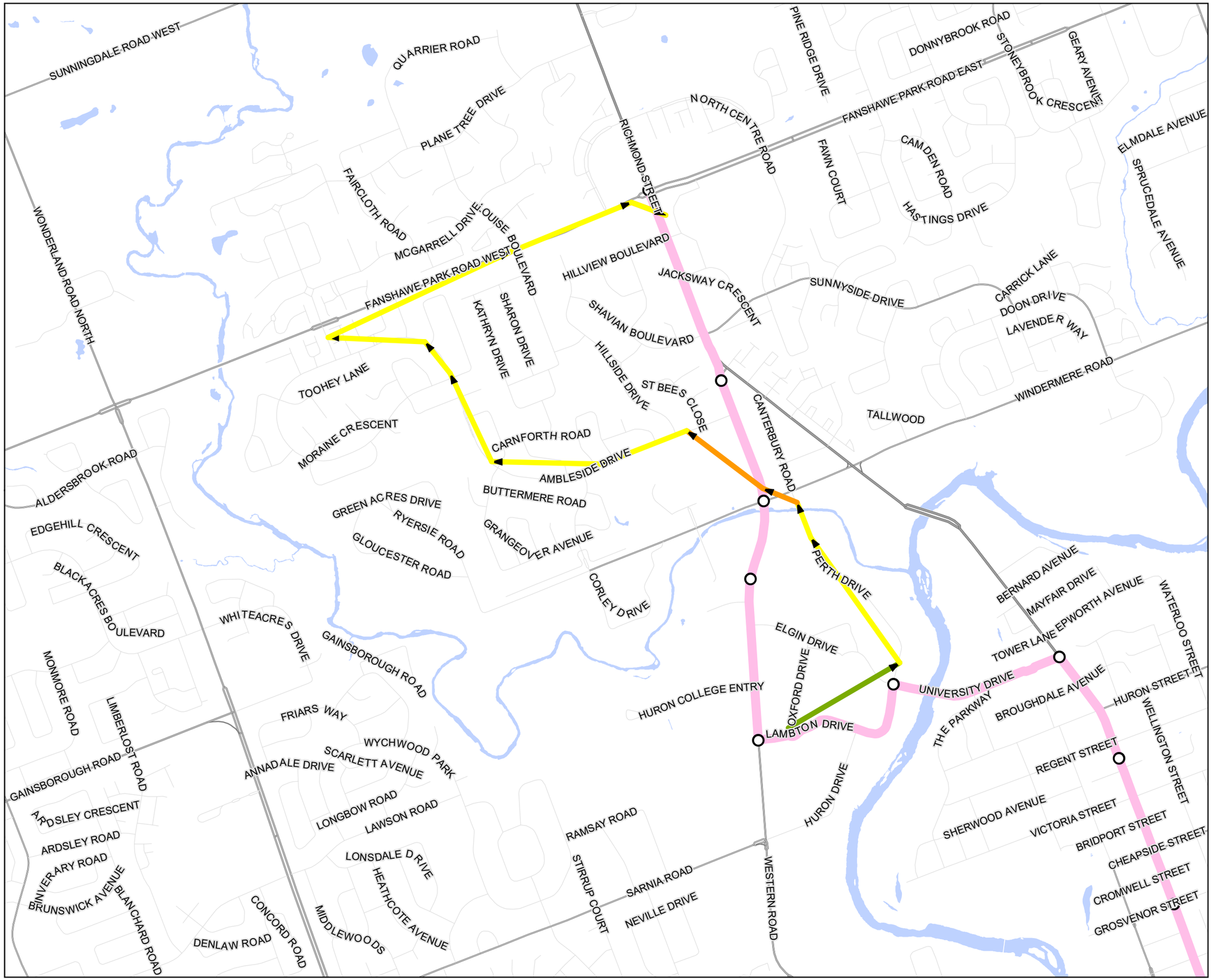
MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 188035
STATUS: FINAL
DATE: 2018-11-27



RAPID TRANSIT INTEGRATION REVIEW

2017 FALL PASSENGER PROFILE

Route: 34 Direction: 0
Period: WKD PM PEAK

Passenger Profile by Route Link

- 0 - 20
- 21 - 50
- 51 - 100
- 101 - 500
- 500+
- BRT Station
- Municipal Boundary
- North-East Route
- South-West Route
- Airport Extension
- South-West Route (Mixed Traffic)
- Railway
- Waterbody

0 0.5 1 km

N E S W

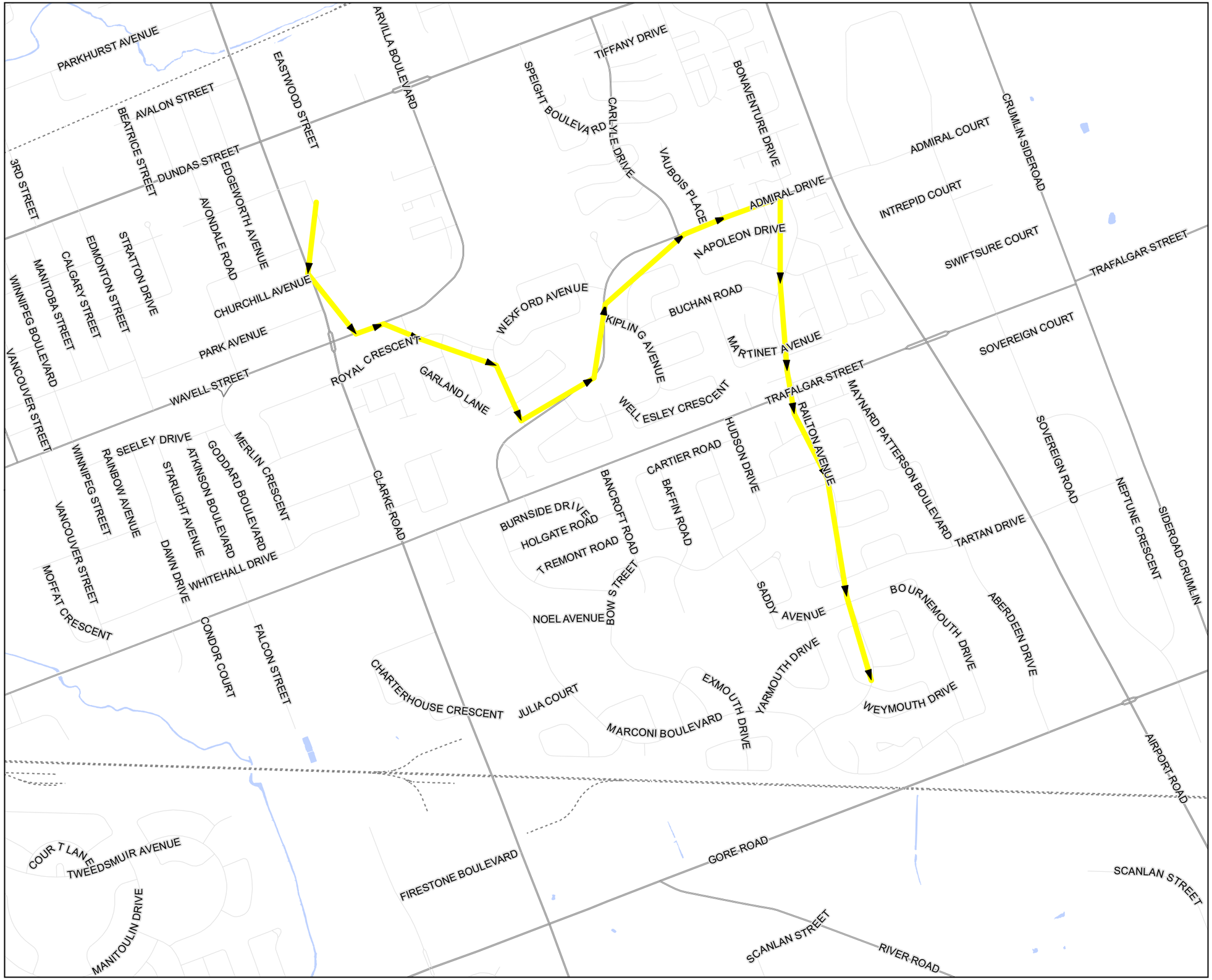
MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 188035
STATUS: FINAL
DATE: 2018-11-27



RAPID TRANSIT INTEGRATION REVIEW

2017 FALL PASSENGER PROFILE

Route: 35 Direction: 0
Period: WKD PM PEAK

Passenger Profile by Route Link

- 0 - 20
- 21 - 50
- 51 - 100
- 101 - 500
- 500+
- BRT Station
- Municipal Boundary
- North-East Route
- South-West Route
- Airport Extension
- South-West Route (Mixed Traffic)
- Railway
- Waterbody

0 0.5 1 km

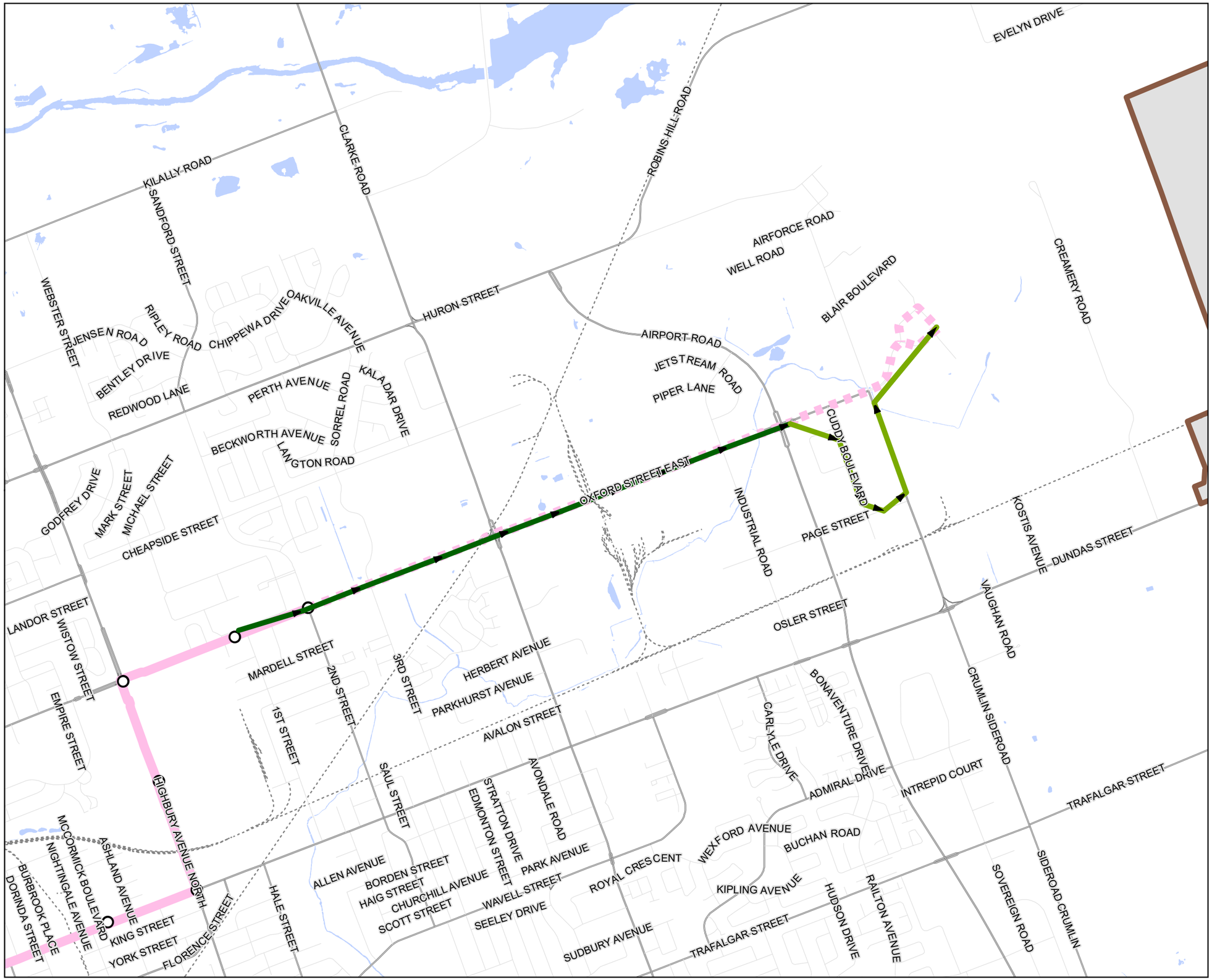
MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 188035
STATUS: FINAL
DATE: 2018-11-27



RAPID TRANSIT INTEGRATION REVIEW

2017 FALL PASSENGER PROFILE

Route: 36 Direction: 0
Period: WKD PM PEAK

Passenger Profile by Route Link

- 0 - 20
- 21 - 50
- 51 - 100
- 101 - 500
- 500+
- BRT Station
- Municipal Boundary
- North-East Route
- South-West Route
- Airport Extension
- South-West Route (Mixed Traffic)
- Railway
- Waterbody

0 0.5 1 km

N W E S

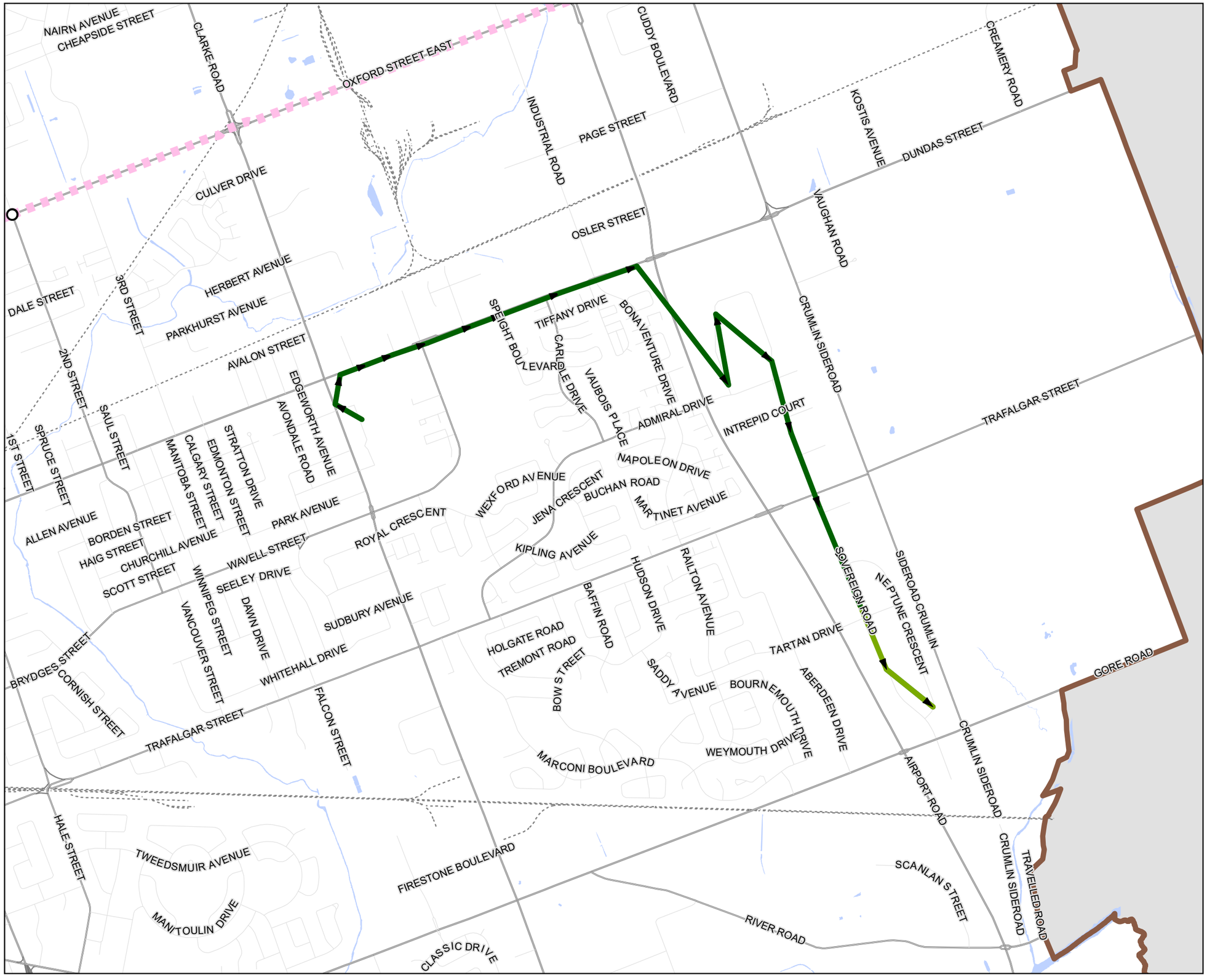
MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 188035
STATUS: FINAL
DATE: 2018-11-27



RAPID TRANSIT INTEGRATION REVIEW

2017 FALL PASSENGER PROFILE

Route: 37 Direction: 0
Period: WKD PM PEAK

Passenger Profile by Route Link

- 0 - 20
- 21 - 50
- 51 - 100
- 101 - 500
- 500+
- BRT Station
- Municipal Boundary
- North-East Route
- South-West Route
- Airport Extension
- South-West Route (Mixed Traffic)
- Railway
- Waterbody

0 0.5 1 km

N W E S

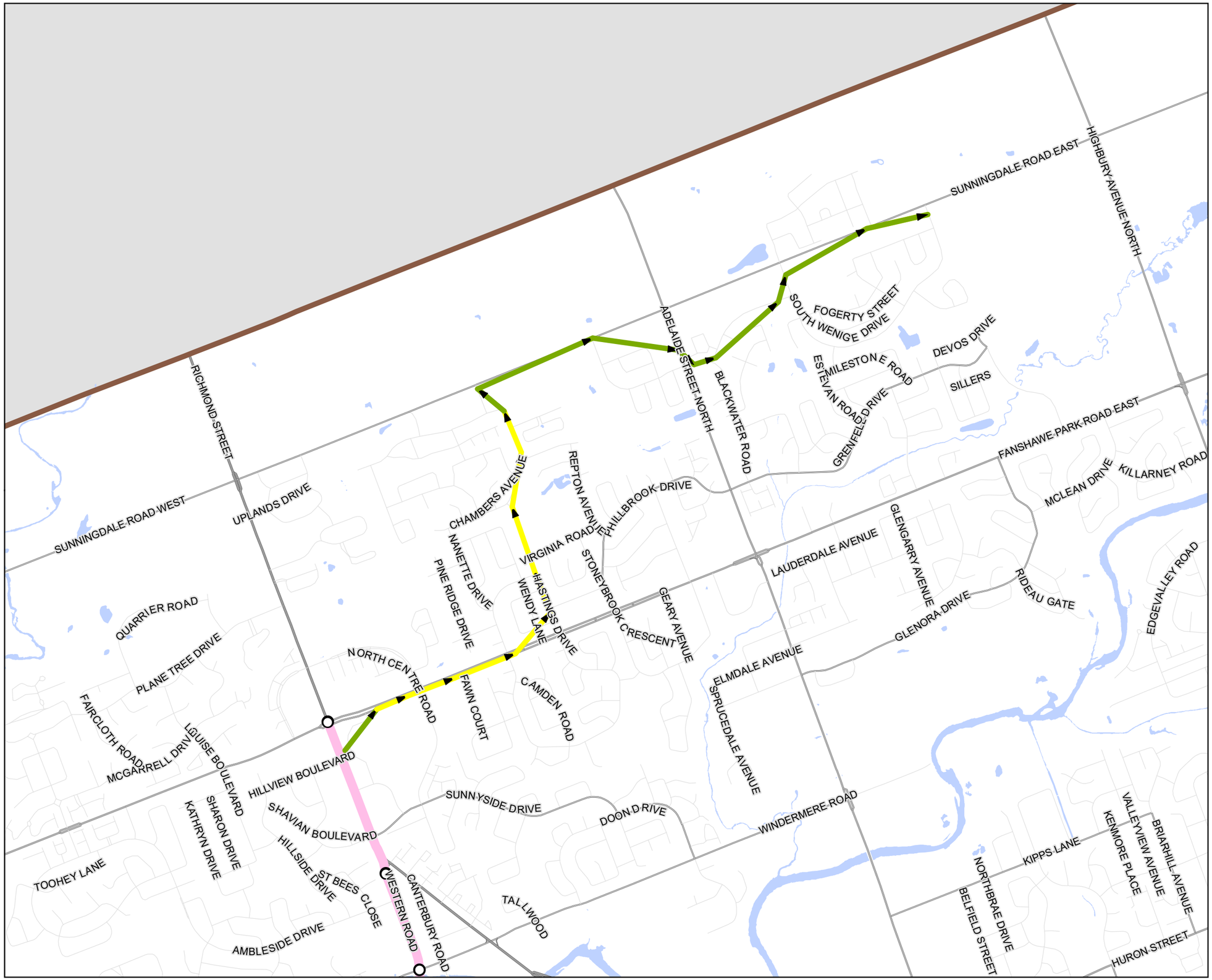
MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 188035
STATUS: FINAL
DATE: 2018-11-27



RAPID TRANSIT INTEGRATION REVIEW

2017 FALL PASSENGER PROFILE

Route: 38 Direction: 0
Period: WKD PM PEAK

Passenger Profile by Route Link

- 0 - 20
- 21 - 50
- 51 - 100
- 101 - 500
- 500+
- BRT Station
- Municipal Boundary
- North-East Route
- South-West Route
- Airport Extension
- South-West Route (Mixed Traffic)
- Railway
- Waterbody

0 0.5 1 km

N W E S

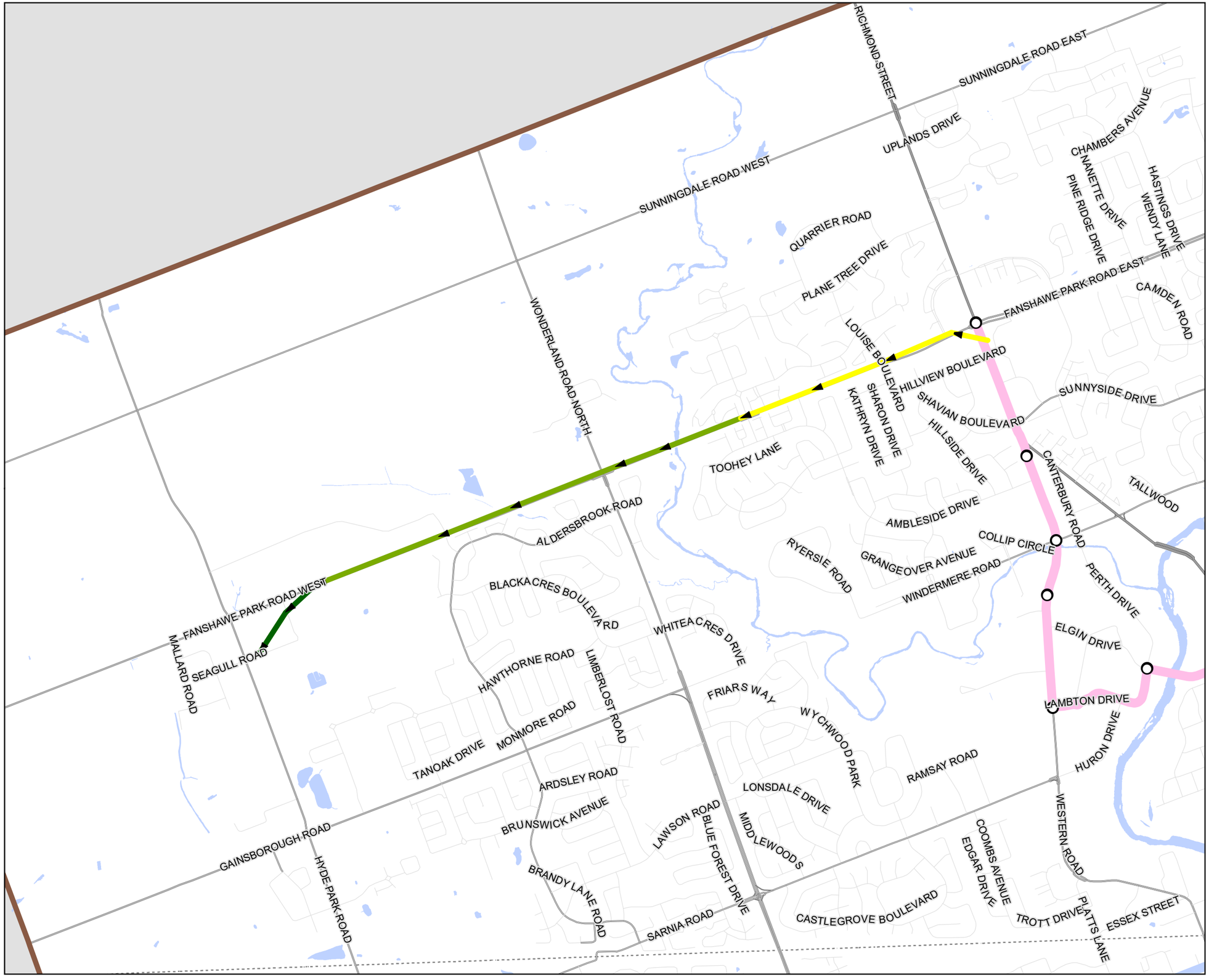
MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 188035
STATUS: FINAL
DATE: 2018-11-27



RAPID TRANSIT INTEGRATION REVIEW

2017 FALL PASSENGER PROFILE

Route: 39 Direction: 0
Period: WKD PM PEAK

Passenger Profile by Route Link

- 0 - 20
- 21 - 50
- 51 - 100
- 101 - 500
- 500+
- BRT Station
- Municipal Boundary
- North-East Route
- South-West Route
- Airport Extension
- South-West Route (Mixed Traffic)
- Railway
- Waterbody

0 0.5 1 km

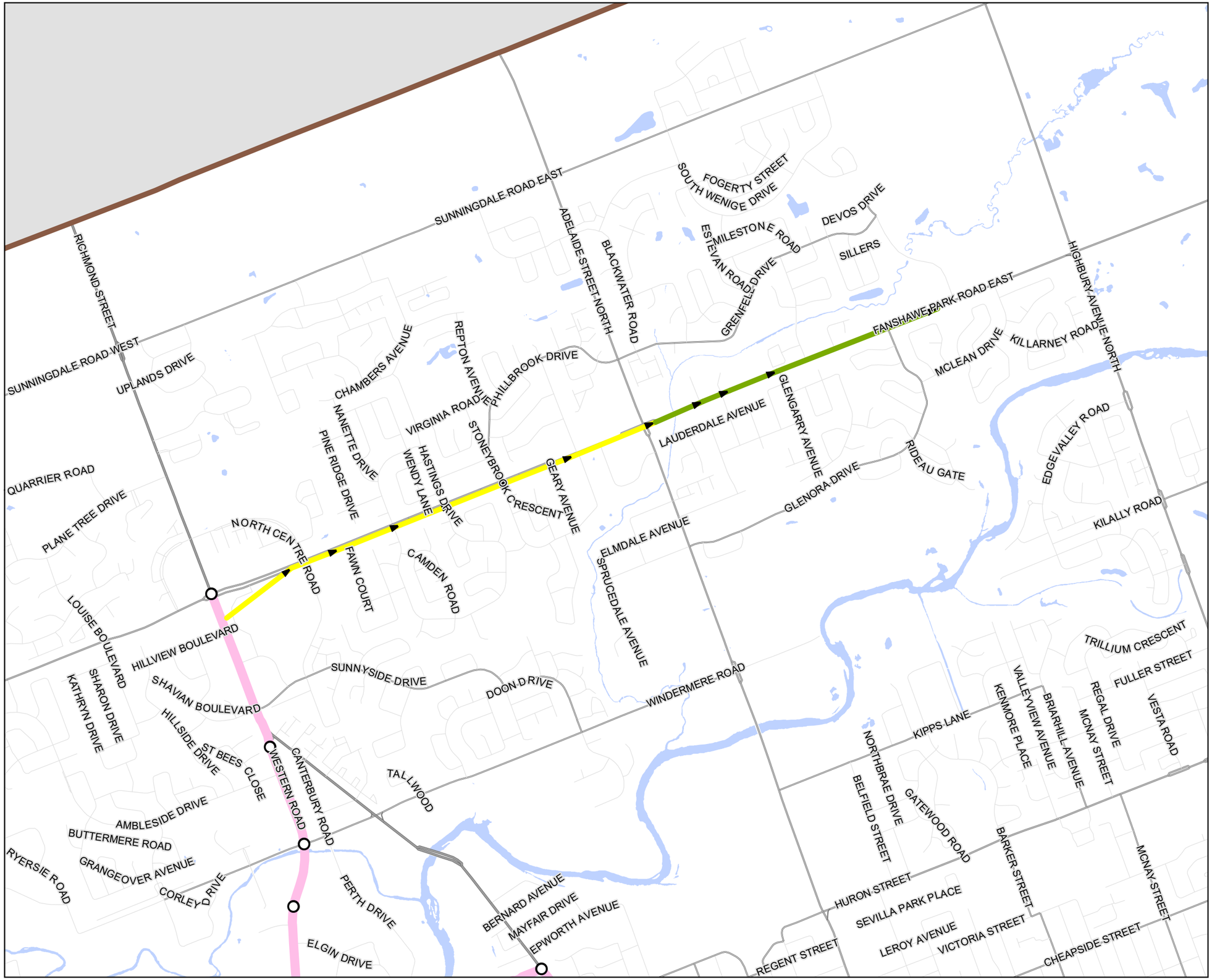
MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 188035
STATUS: FINAL
DATE: 2018-11-27



RAPID TRANSIT INTEGRATION REVIEW

2017 FALL PASSENGER PROFILE

Route: 40 Direction: 0
Period: WKD PM PEAK

Passenger Profile by Route Link

- 0 - 20
- 21 - 50
- 51 - 100
- 101 - 500
- 500+
- BRT Station
- Municipal Boundary
- North-East Route
- South-West Route
- Airport Extension
- South-West Route (Mixed Traffic)
- Railway
- Waterbody

0 0.5 1 km

N W E S

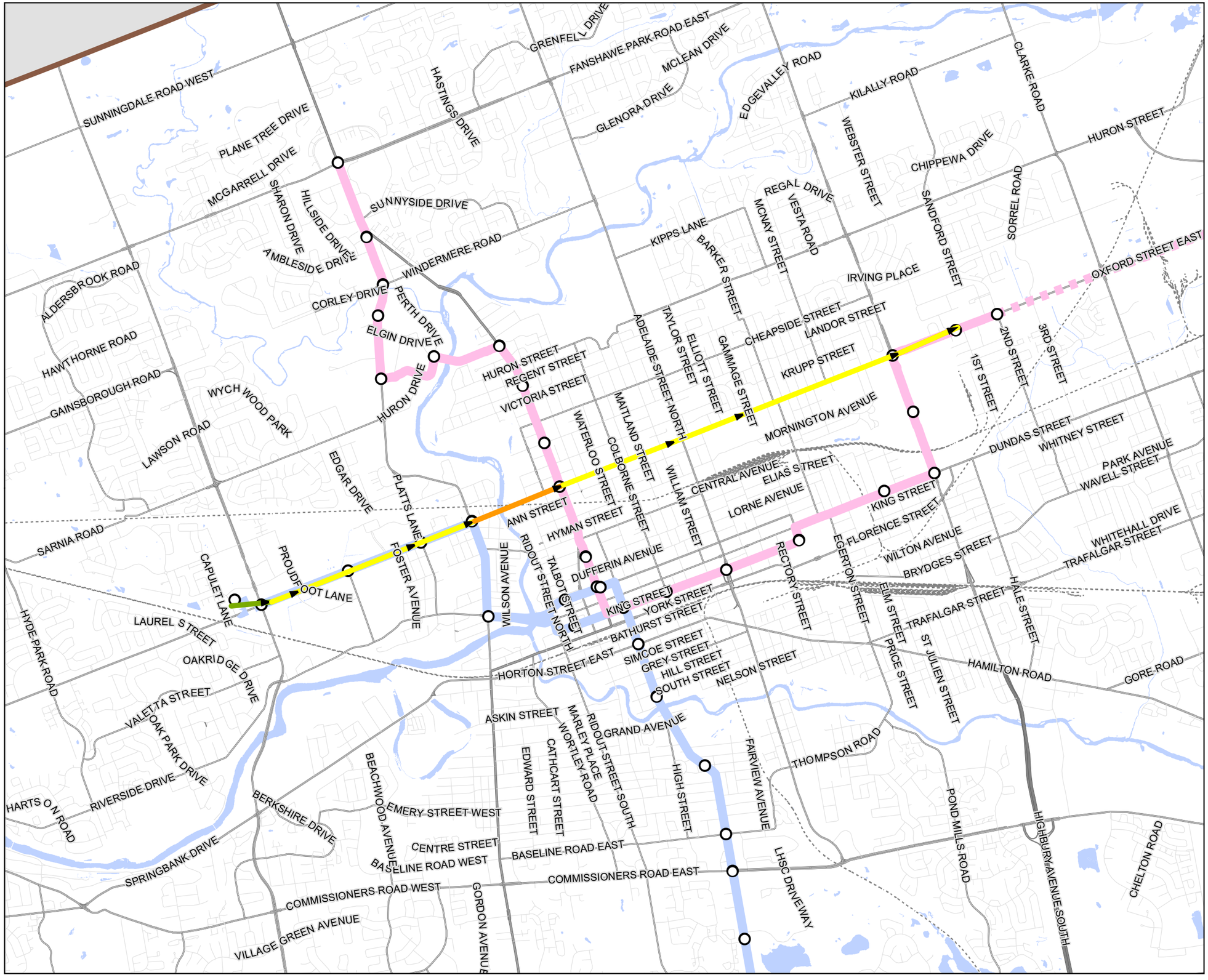
MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 188035
STATUS: FINAL
DATE: 2018-11-27



RAPID TRANSIT INTEGRATION REVIEW

2017 FALL PASSENGER PROFILE

Route: 91 Direction: 0
Period: WKD PM PEAK

Passenger Profile by Route Link

- 0 - 20
- 21 - 50
- 51 - 100
- 101 - 500
- 500+
- BRT Station
- Municipal Boundary
- North-East Route
- South-West Route
- Airport Extension
- South-West Route (Mixed Traffic)
- Railway
- Waterbody

0 0.5 1 km

N W E S

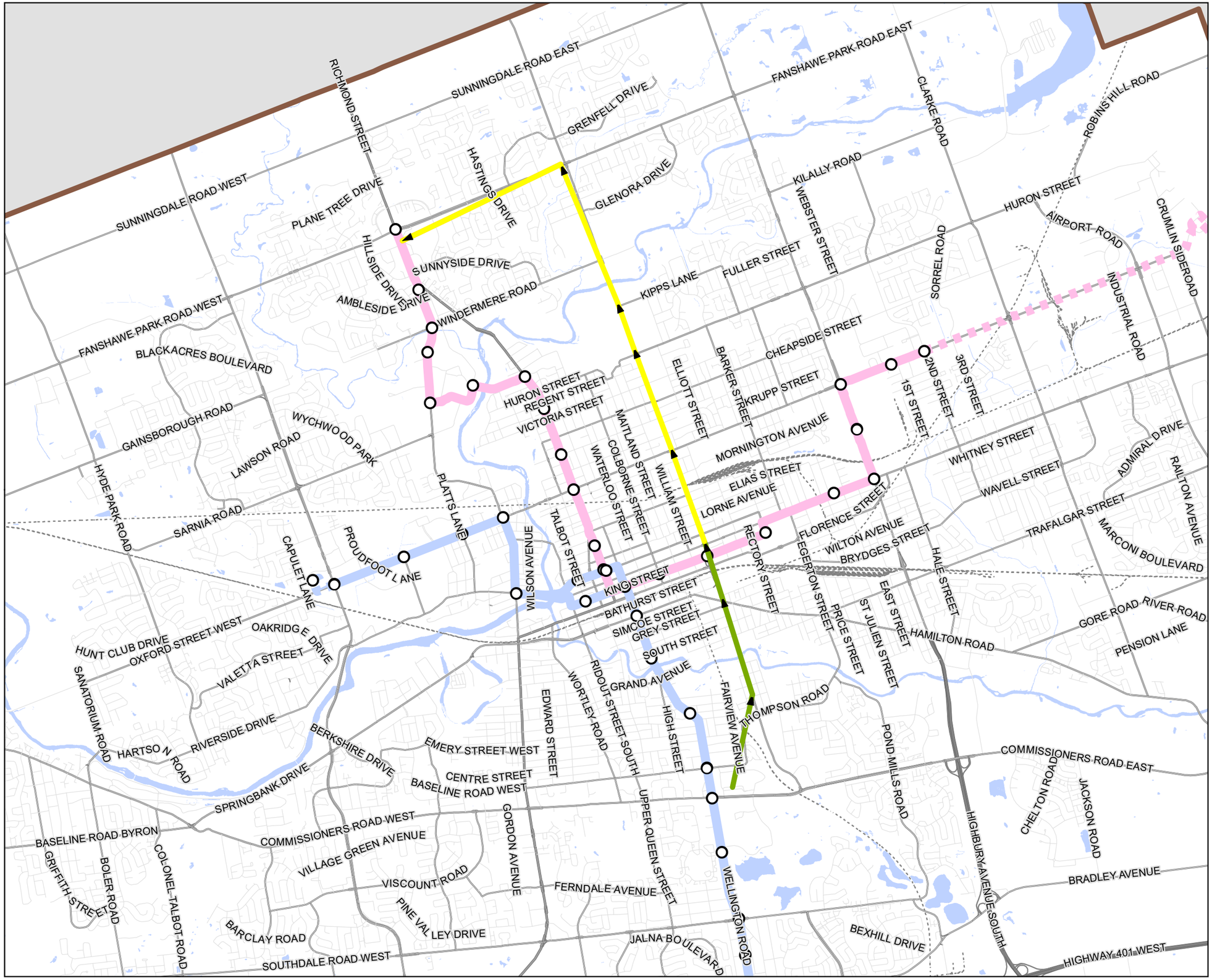
MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 188035
STATUS: FINAL
DATE: 2018-11-27



RAPID TRANSIT INTEGRATION REVIEW

2017 FALL PASSENGER PROFILE

Route: 92 Direction: 0
Period: WKD PM PEAK

Passenger Profile by Route Link

- 0 - 20
- 21 - 50
- 51 - 100
- 101 - 500
- 500+
- BRT Station
- Municipal Boundary
- North-East Route
- South-West Route
- Airport Extension
- South-West Route (Mixed Traffic)
- Railway
- Waterbody

0 0.5 1 km

N W E S

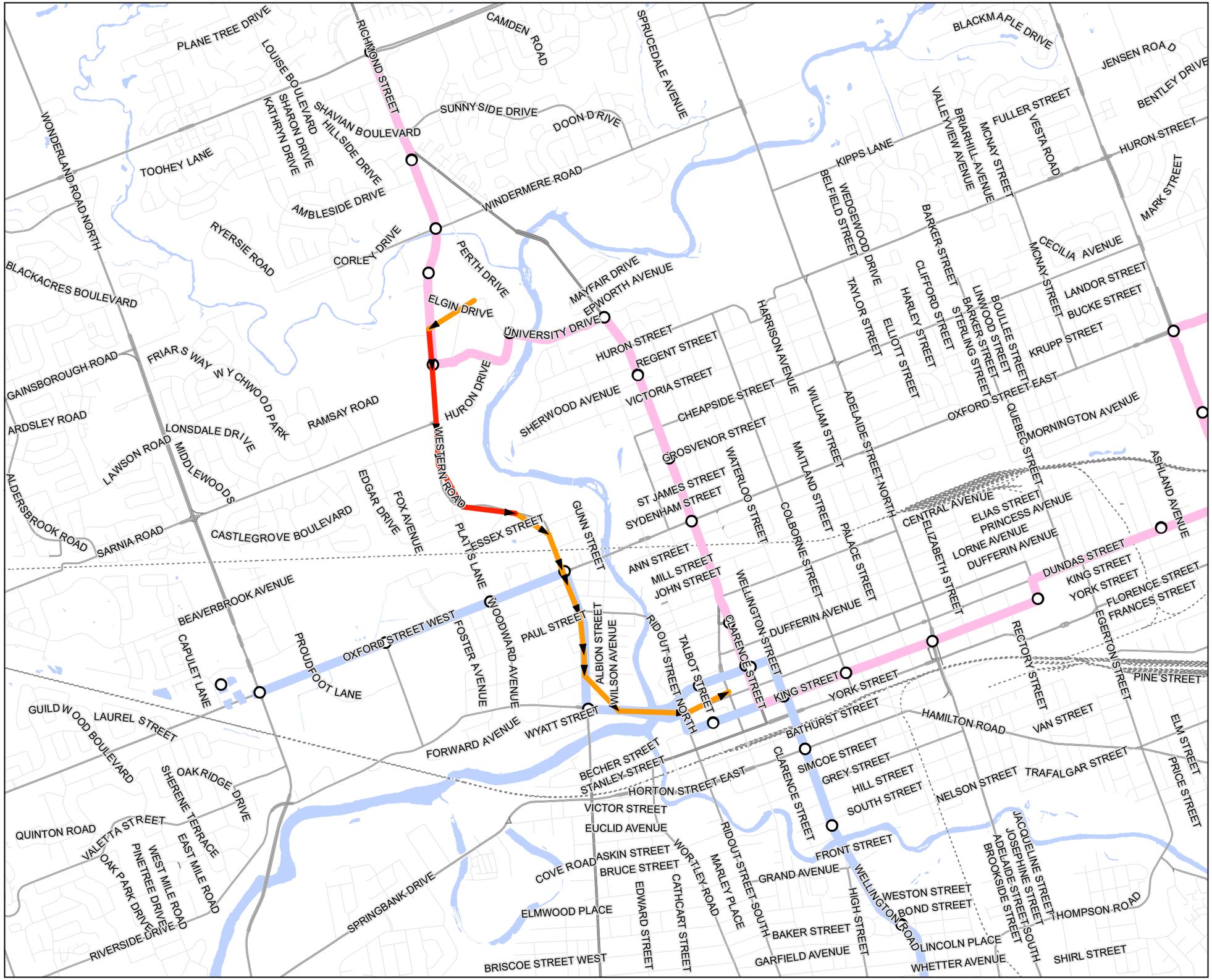
MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 188035
STATUS: FINAL
DATE: 2018-11-27



RAPID TRANSIT INTEGRATION REVIEW

2017 FALL PASSENGER PROFILE

Route: 102 Direction: 0
Period: WKD PM PEAK

Passenger Profile by Route Link

- 0 - 20
- 21 - 50
- 51 - 100
- 101 - 500
- 500+
- BRT Station
- Municipal Boundary
- North-East Route
- South-West Route
- Airport Extension
- South-West Route (Mixed Traffic)
- Railway
- Waterbody

0 0.5 1 km

N W E S

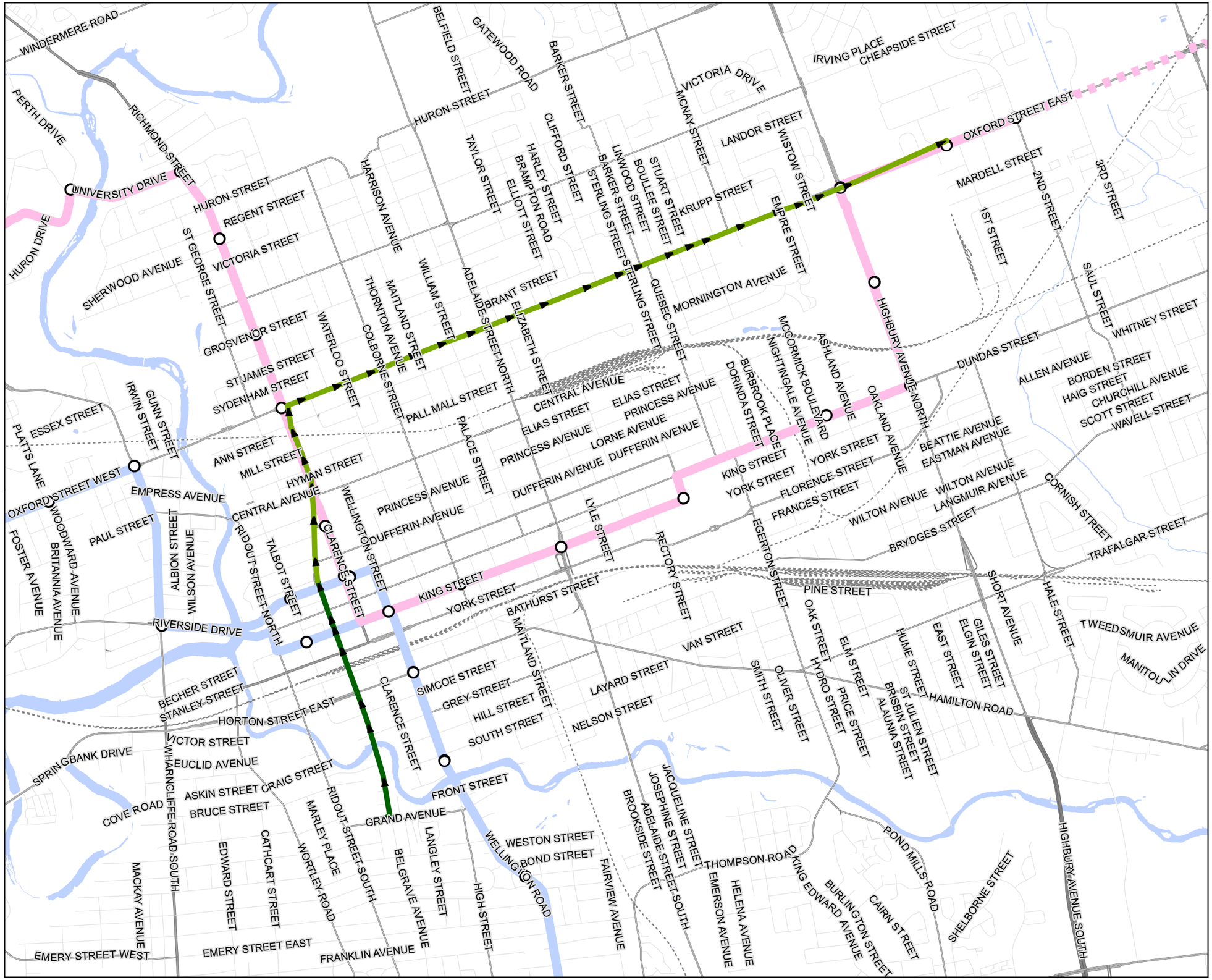
MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 188035
STATUS: FINAL
DATE: 2018-11-27



RAPID TRANSIT INTEGRATION REVIEW

2017 FALL PASSENGER PROFILE

Route: 104 Direction: 0
Period: WKD PM PEAK

Passenger Profile by Route Link

- 0 - 20
- 21 - 50
- 51 - 100
- 101 - 500
- 500+
- BRT Station
- Municipal Boundary
- North-East Route
- South-West Route
- Airport Extension
- South-West Route (Mixed Traffic)
- Railway
- Waterbody

0 0.5 1 km

N W E S

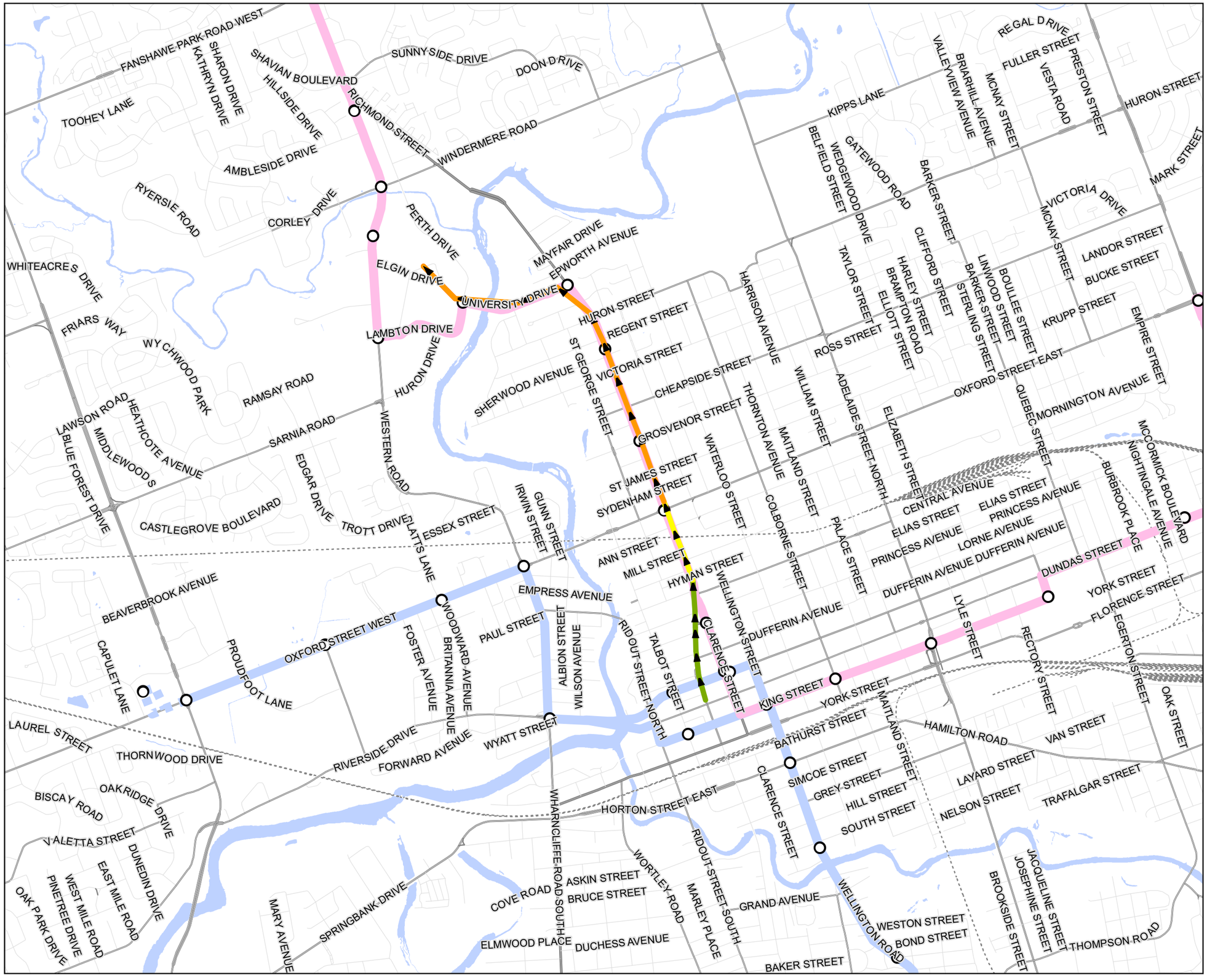
MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 188035
STATUS: FINAL
DATE: 2018-11-27



RAPID TRANSIT INTEGRATION REVIEW

2017 FALL PASSENGER PROFILE

Route: 106 Direction: 0
Period: WKD PM PEAK

Passenger Profile by Route Link

- 0 - 20
- 21 - 50
- 51 - 100
- 101 - 500
- 500+
- BRT Station
- Municipal Boundary
- North-East Route
- South-West Route
- Airport Extension
- South-West Route (Mixed Traffic)
- Railway
- Waterbody

0 0.5 1 km

N W E S

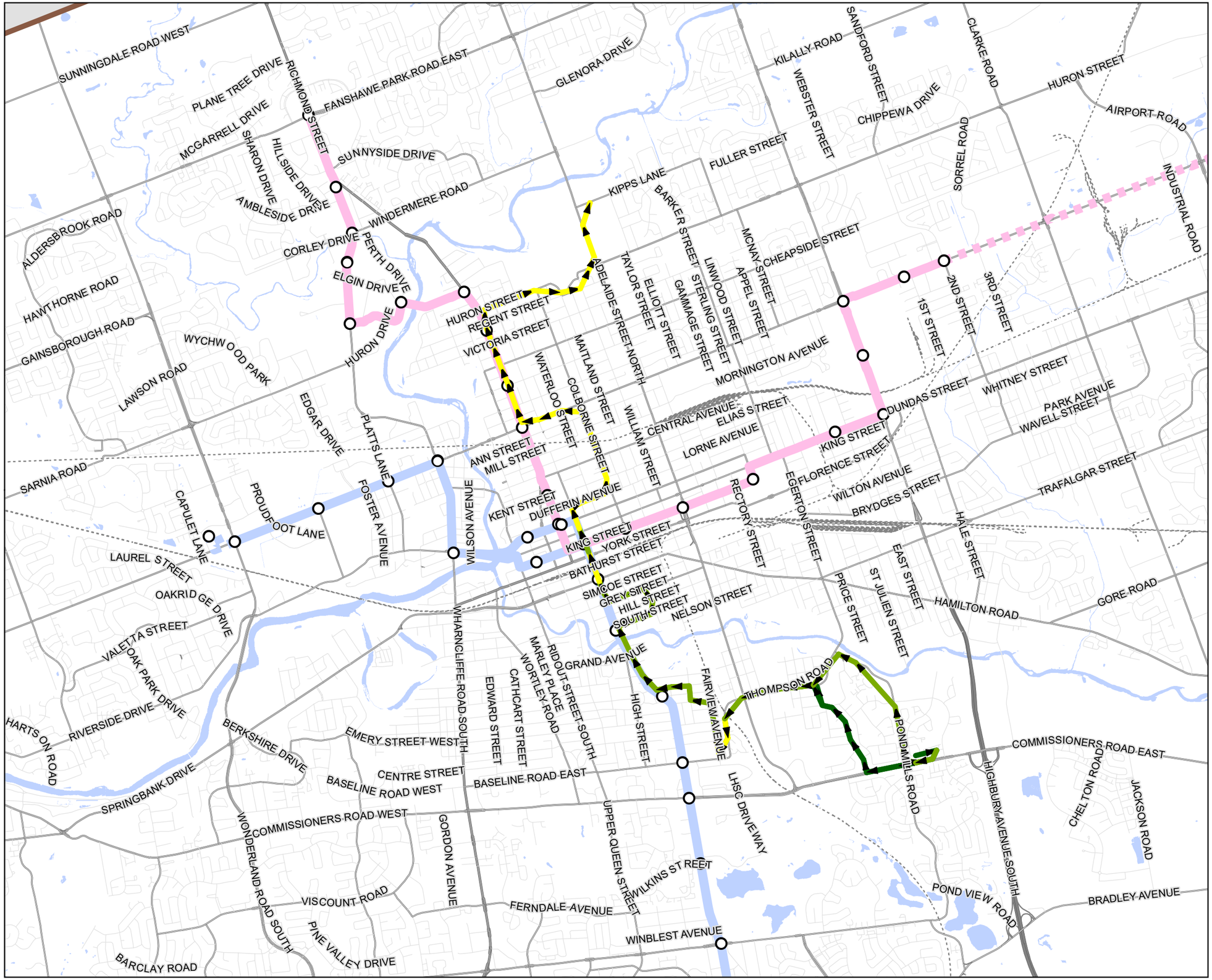
MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 188035
STATUS: FINAL
DATE: 2018-11-27



RAPID TRANSIT INTEGRATION REVIEW

2017 FALL PASSENGER PROFILE

Route: 1 Direction: 1
Period: WKD PM PEAK

Passenger Profile by Route Link

- 0 - 20
- 21 - 50
- 51 - 100
- 101 - 500
- 500+
- BRT Station
- Municipal Boundary
- North-East Route
- South-West Route
- Airport Extension
- South-West Route (Mixed Traffic)
- Railway
- Waterbody

0 0.5 1 km

N W E S

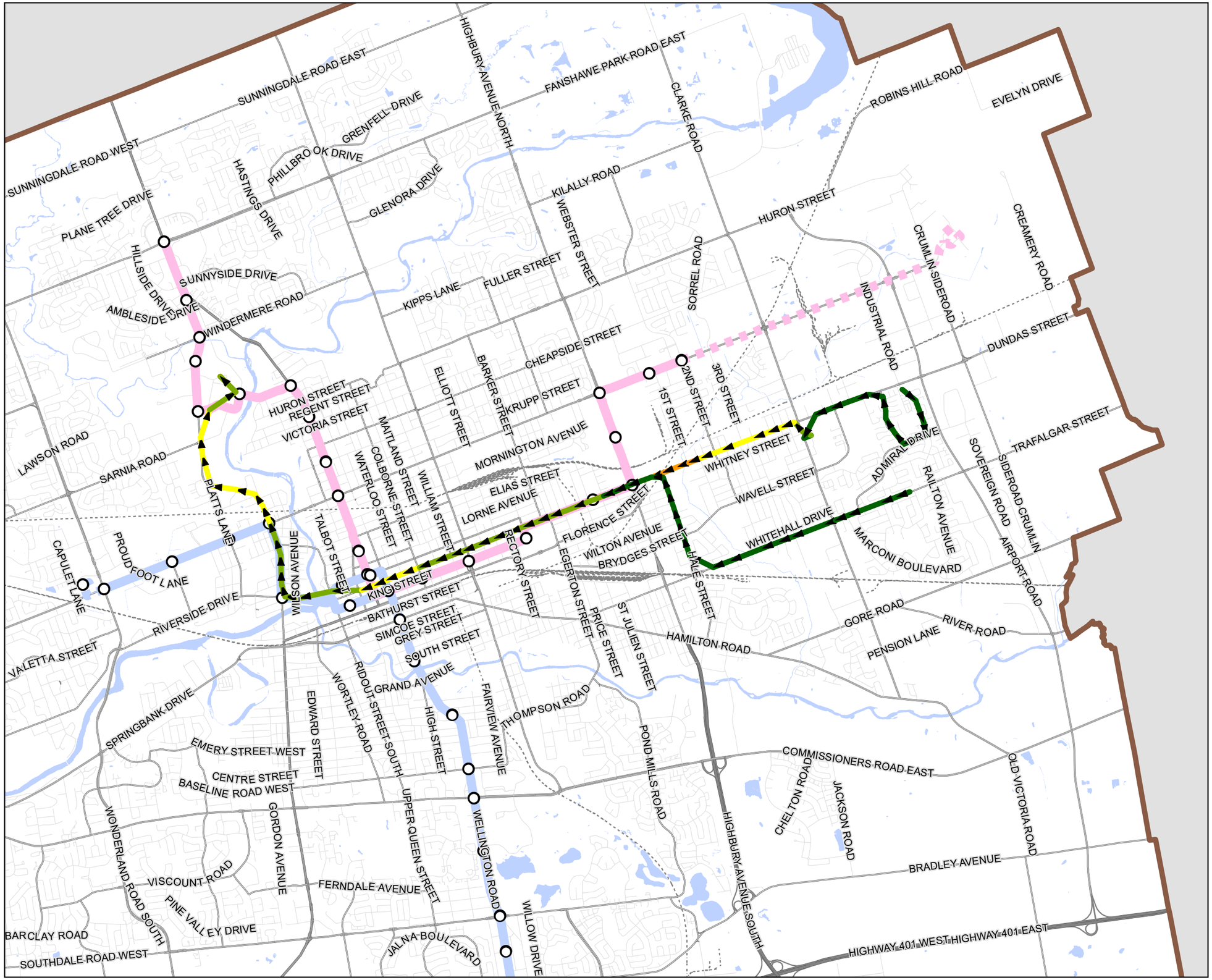
MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 188035
STATUS: FINAL
DATE: 2018-11-27



RAPID TRANSIT INTEGRATION REVIEW

2017 FALL PASSENGER PROFILE

Route: 2 Direction: I
Period: WKD PM PEAK

Passenger Profile by Route Link

- 0 - 20
- 21 - 50
- 51 - 100
- 101 - 500
- 500+
- BRT Station
- Municipal Boundary
- North-East Route
- South-West Route
- Airport Extension
- South-West Route (Mixed Traffic)
- Railway
- Waterbody

0 0.5 1 km

N W E S

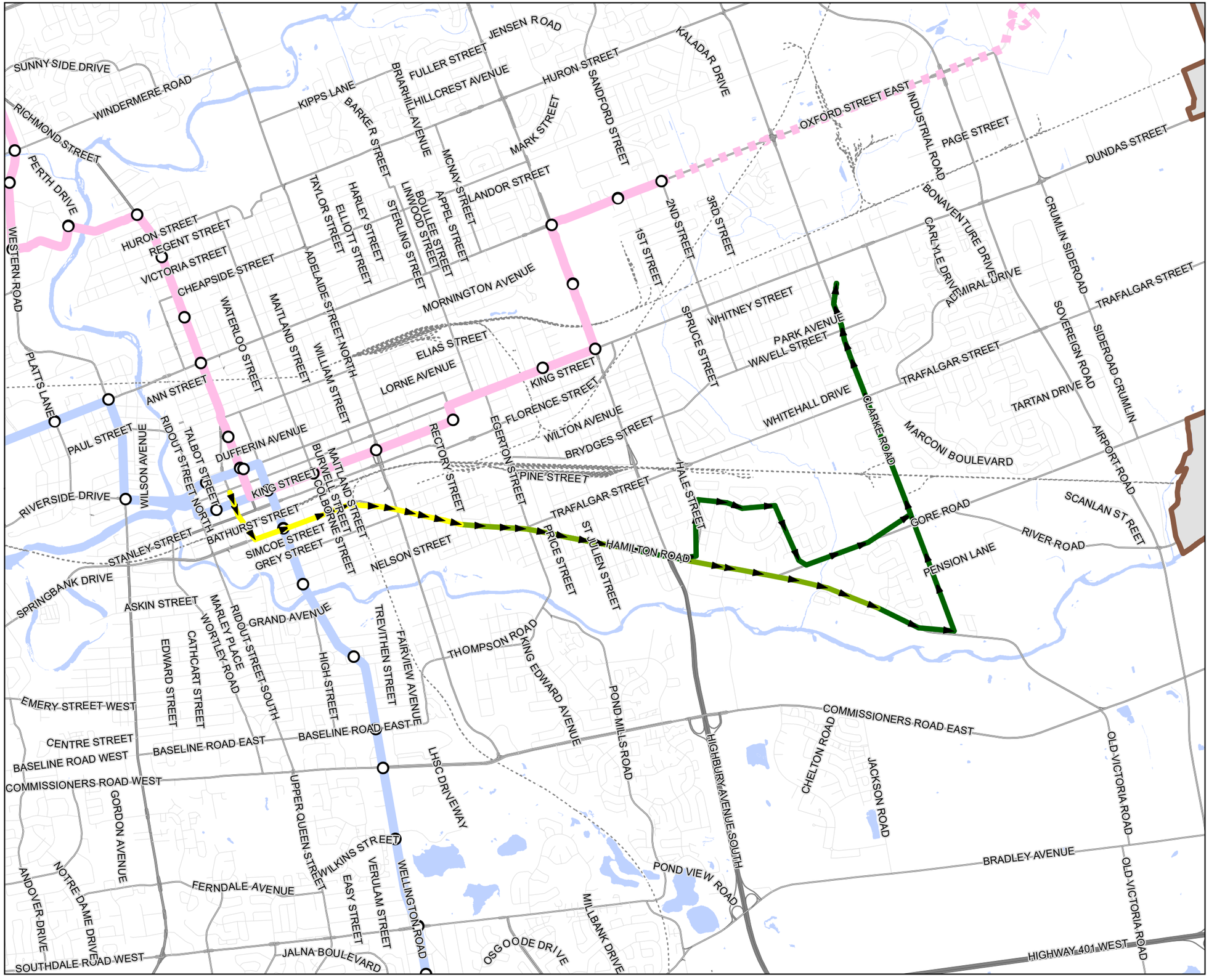
MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 188035
STATUS: FINAL
DATE: 2018-11-27



RAPID TRANSIT INTEGRATION REVIEW

2017 FALL PASSENGER PROFILE

Route: 3 Direction: I
Period: WKD PM PEAK

Passenger Profile by Route Link

- 0 - 20
- 21 - 50
- 51 - 100
- 101 - 500
- 500+
- BRT Station
- Municipal Boundary
- North-East Route
- South-West Route
- Airport Extension
- South-West Route (Mixed Traffic)
- Railway
- Waterbody

0 0.5 1 km

N W E S

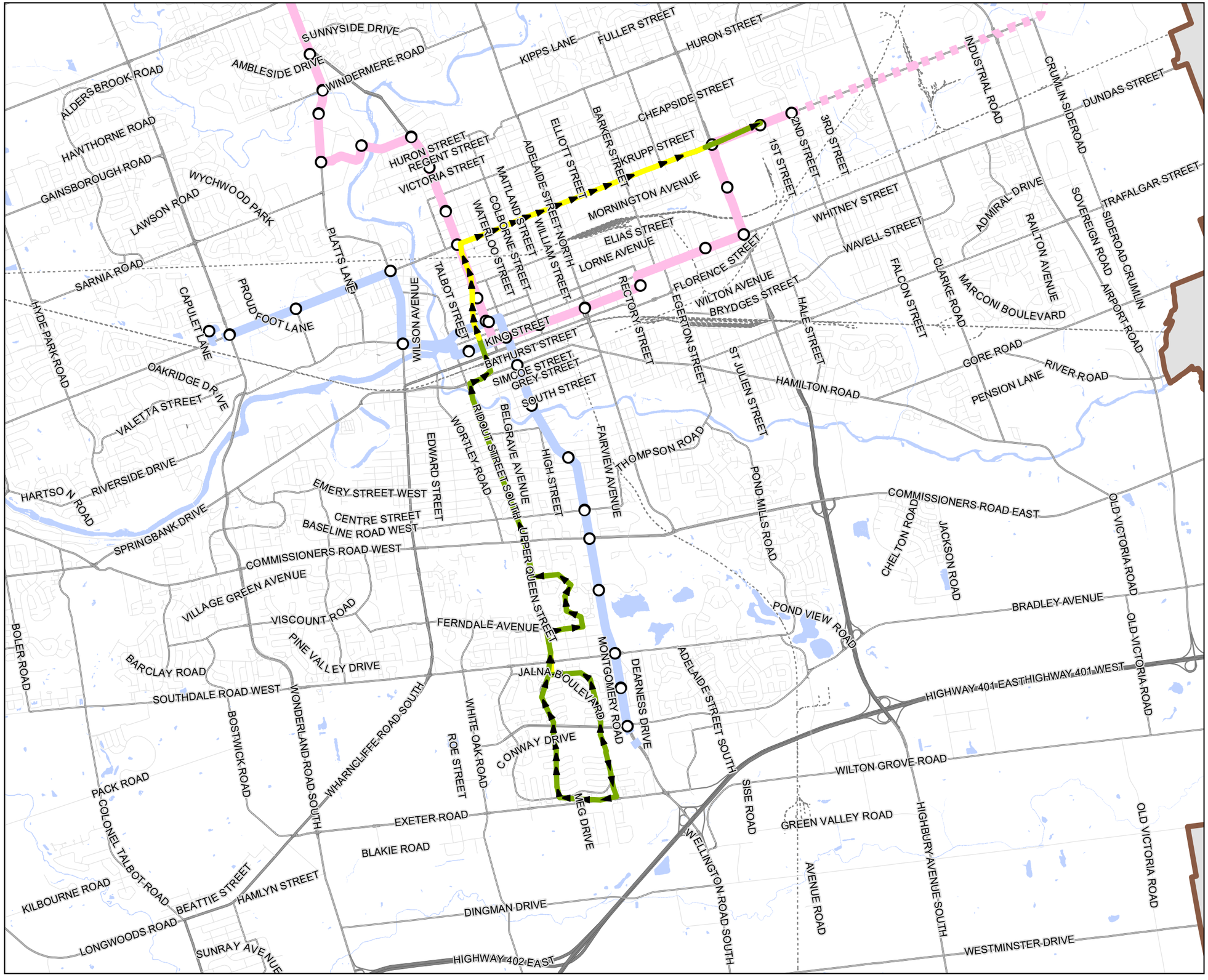
MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 188035
STATUS: FINAL
DATE: 2018-11-27



RAPID TRANSIT INTEGRATION REVIEW

2017 FALL PASSENGER PROFILE

Route: 4 Direction: I
Period: WKD PM PEAK

Passenger Profile by Route Link

- 0 - 20
- 21 - 50
- 51 - 100
- 101 - 500
- 500+
- BRT Station
- Municipal Boundary
- North-East Route
- South-West Route
- Airport Extension
- South-West Route (Mixed Traffic)
- Railway
- Waterbody

0 0.5 1 km

N W E S

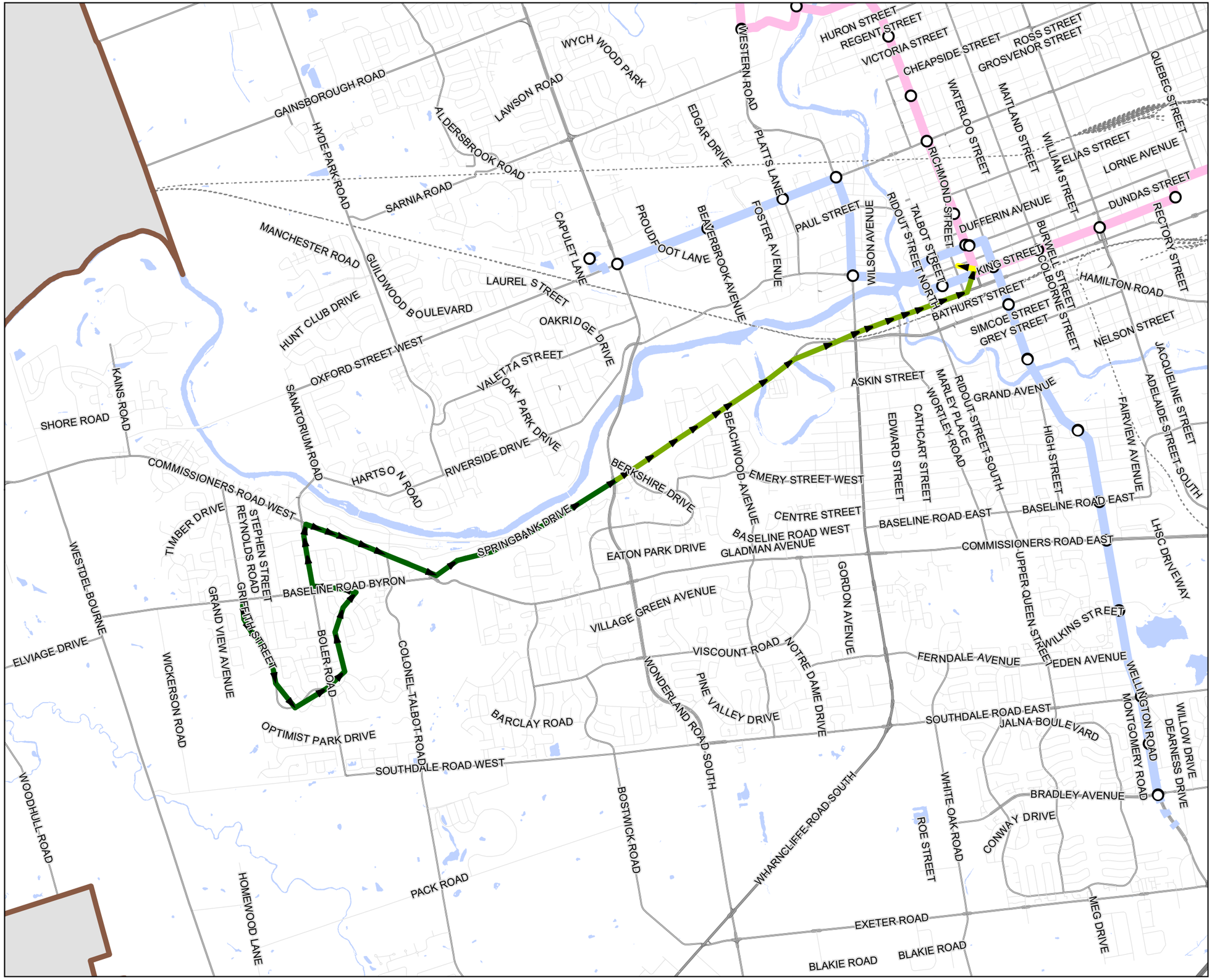
MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 188035
STATUS: FINAL
DATE: 2018-11-27



RAPID TRANSIT INTEGRATION REVIEW

2017 FALL PASSENGER PROFILE

Route: 5 Direction: I
Period: WKD PM PEAK

Passenger Profile by Route Link

- 0 - 20
- 21 - 50
- 51 - 100
- 101 - 500
- 500+
- BRT Station
- Municipal Boundary
- North-East Route
- South-West Route
- Airport Extension
- South-West Route (Mixed Traffic)
- Railway
- Waterbody

0 0.5 1 km

N W E S

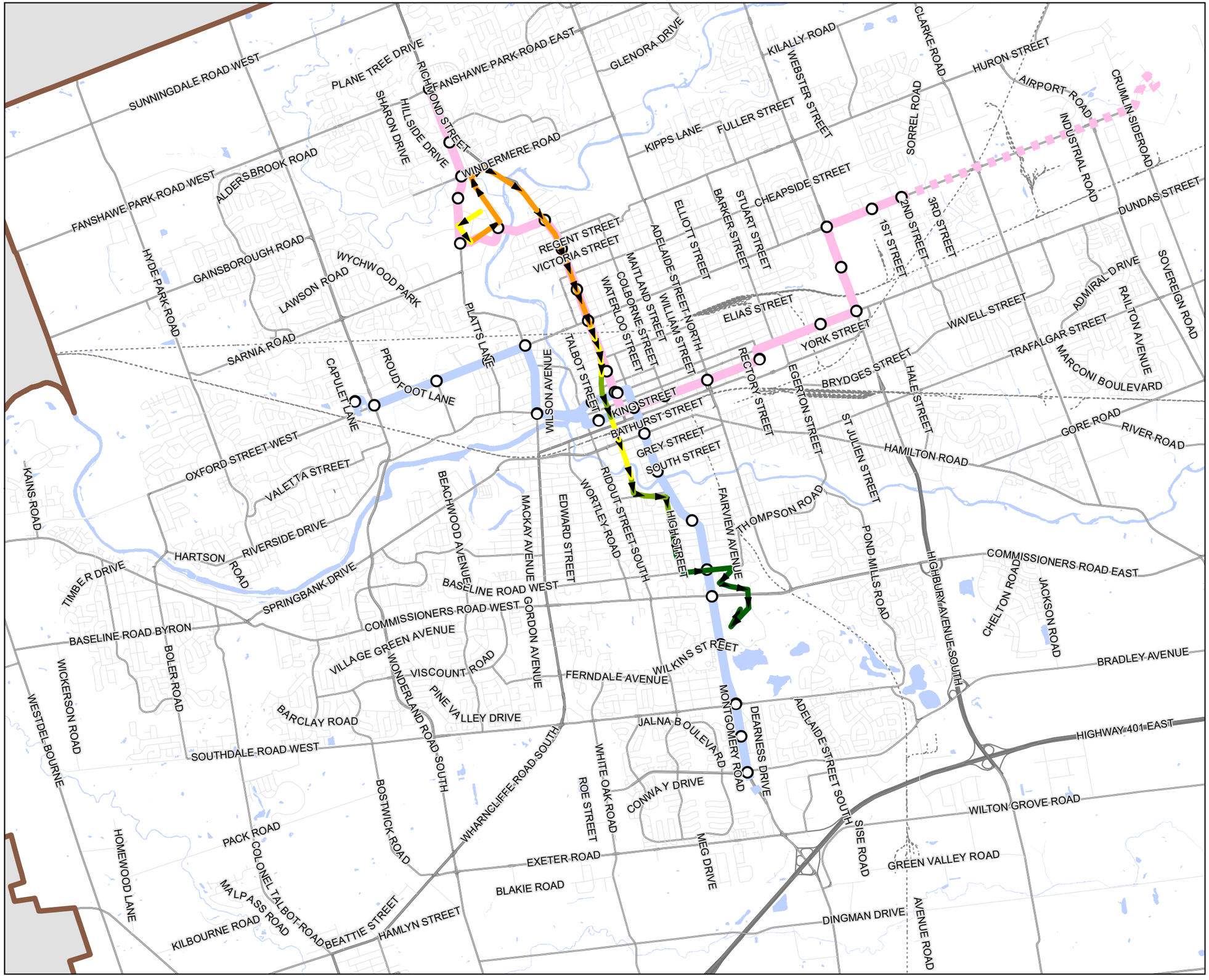
MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 188035
STATUS: FINAL
DATE: 2018-11-27



RAPID TRANSIT INTEGRATION REVIEW

2017 FALL PASSENGER PROFILE

Route: 6 Direction: I
Period: WKD PM PEAK

Passenger Profile by Route Link

- 0 - 20
- 21 - 50
- 51 - 100
- 101 - 500
- 500+
- BRT Station
- Municipal Boundary
- North-East Route
- South-West Route
- Airport Extension
- South-West Route (Mixed Traffic)
- Railway
- Waterbody

0 0.5 1 km

N W E S

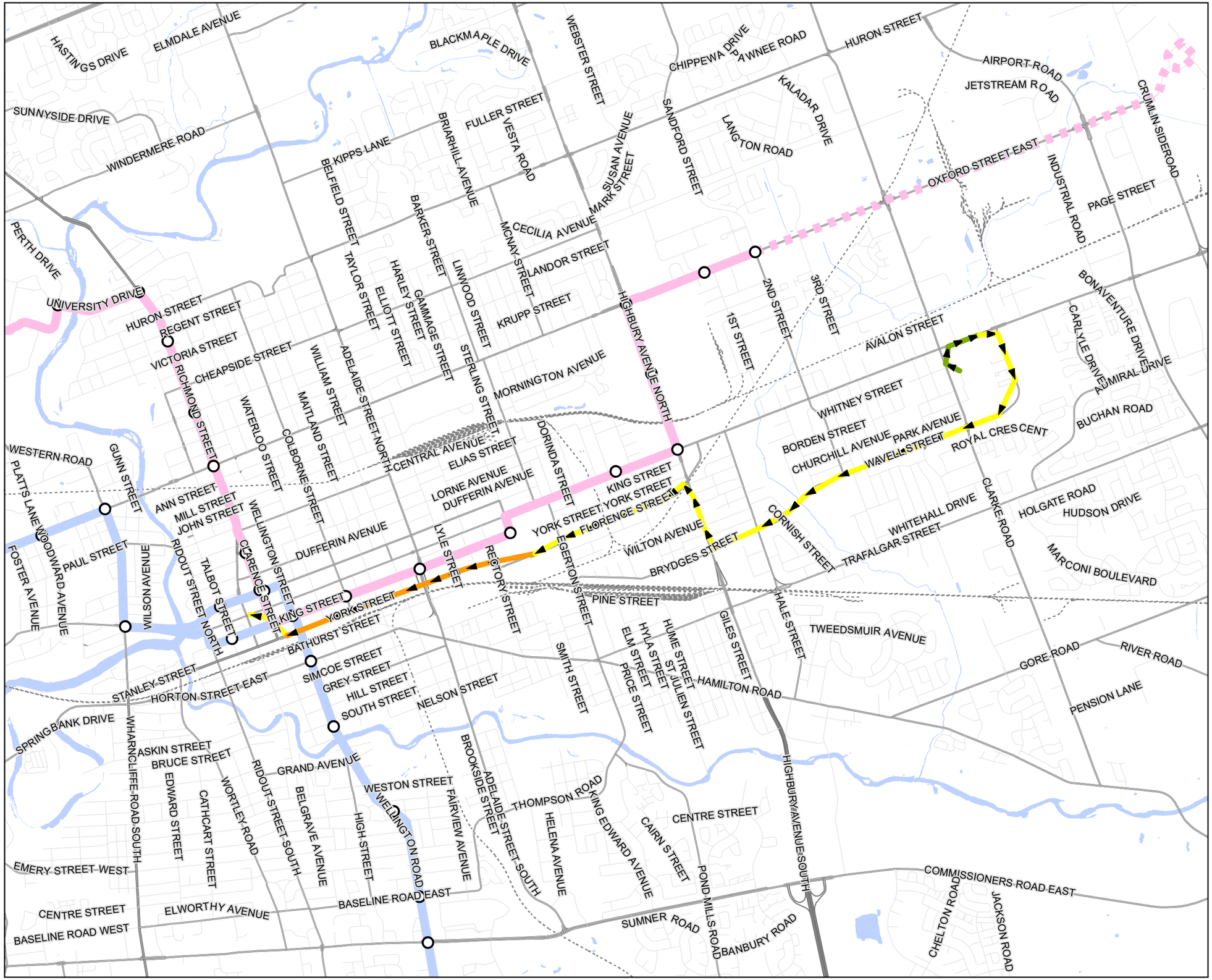
MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 188035
STATUS: FINAL
DATE: 2018-11-27



RAPID TRANSIT INTEGRATION REVIEW

2017 FALL PASSENGER PROFILE

Route: 7 Direction: I
Period: WKD PM PEAK

Passenger Profile by Route Link

- 0 - 20
- 21 - 50
- 51 - 100
- 101 - 500
- 500+
- BRT Station
- Municipal Boundary
- North-East Route
- South-West Route
- Airport Extension
- South-West Route (Mixed Traffic)
- Railway
- Waterbody

0 0.5 1 km

N W E S

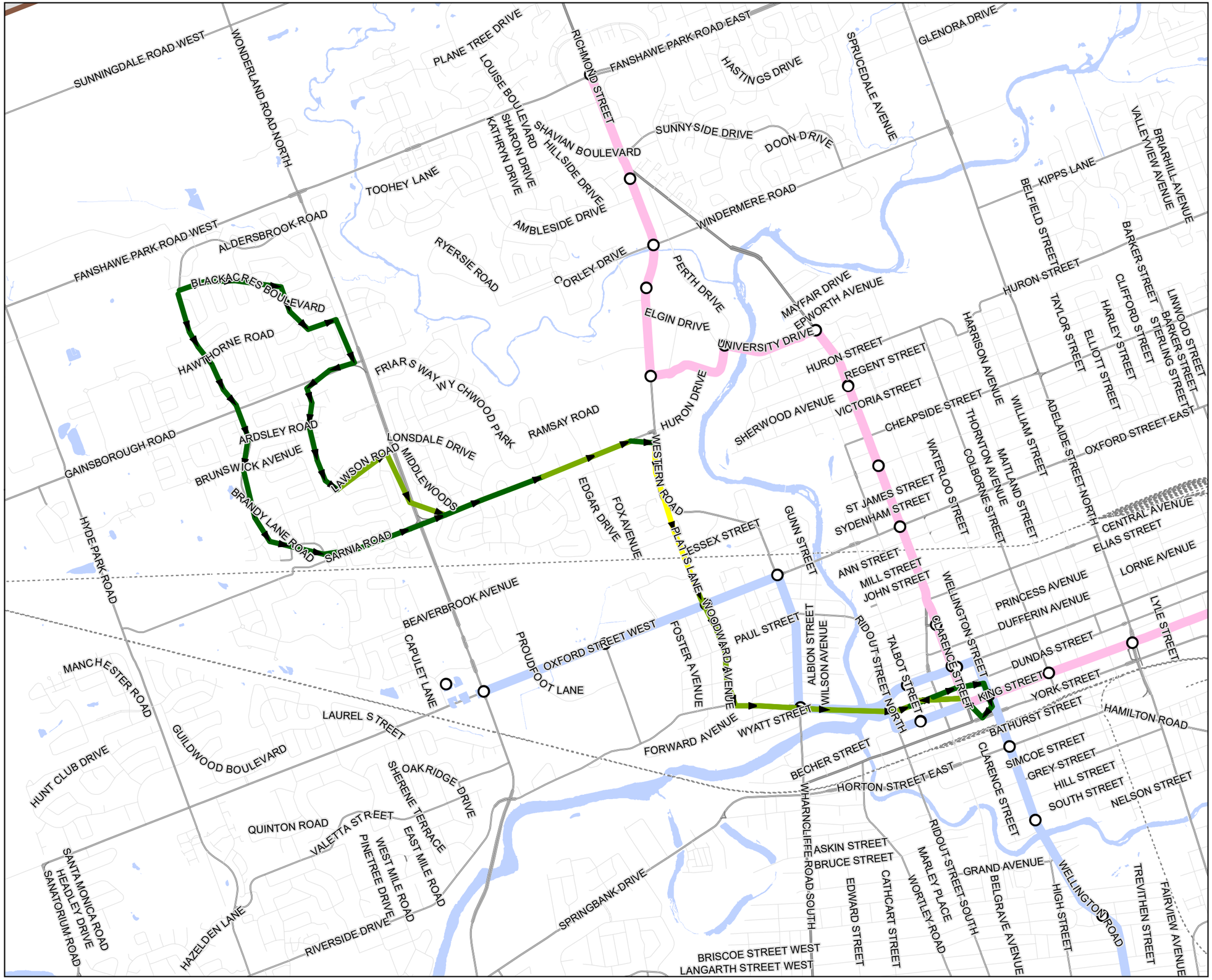
MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 188035
STATUS: FINAL
DATE: 2018-11-27



RAPID TRANSIT INTEGRATION REVIEW

2017 FALL PASSENGER PROFILE

Route: 9 Direction: I
Period: WKD PM PEAK

Passenger Profile by Route Link

- 0 - 20
- 21 - 50
- 51 - 100
- 101 - 500
- 500+
- BRT Station
- Municipal Boundary
- North-East Route
- South-West Route
- Airport Extension
- South-West Route (Mixed Traffic)
- Railway
- Waterbody

0 0.5 1 km

N W E S

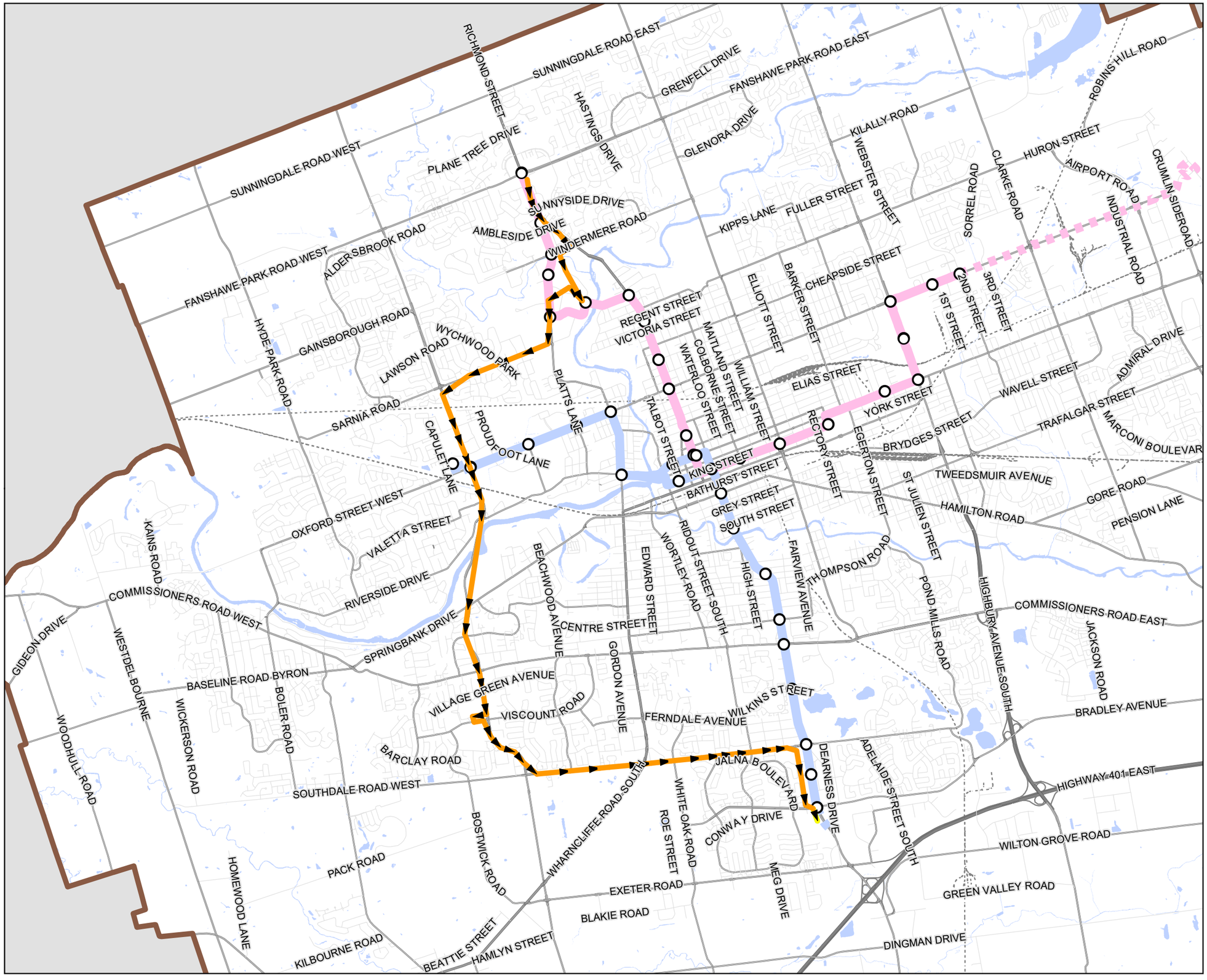
MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 188035
STATUS: FINAL
DATE: 2018-11-27



RAPID TRANSIT INTEGRATION REVIEW

2017 FALL PASSENGER PROFILE

Route: 10 Direction: 1
Period: WKD PM PEAK

Passenger Profile by Route Link

- 0 - 20
- 21 - 50
- 51 - 100
- 101 - 500
- 500+
- BRT Station
- Municipal Boundary
- North-East Route
- South-West Route
- Airport Extension
- South-West Route (Mixed Traffic)
- Railway
- Waterbody

0 0.5 1 km

N W E S

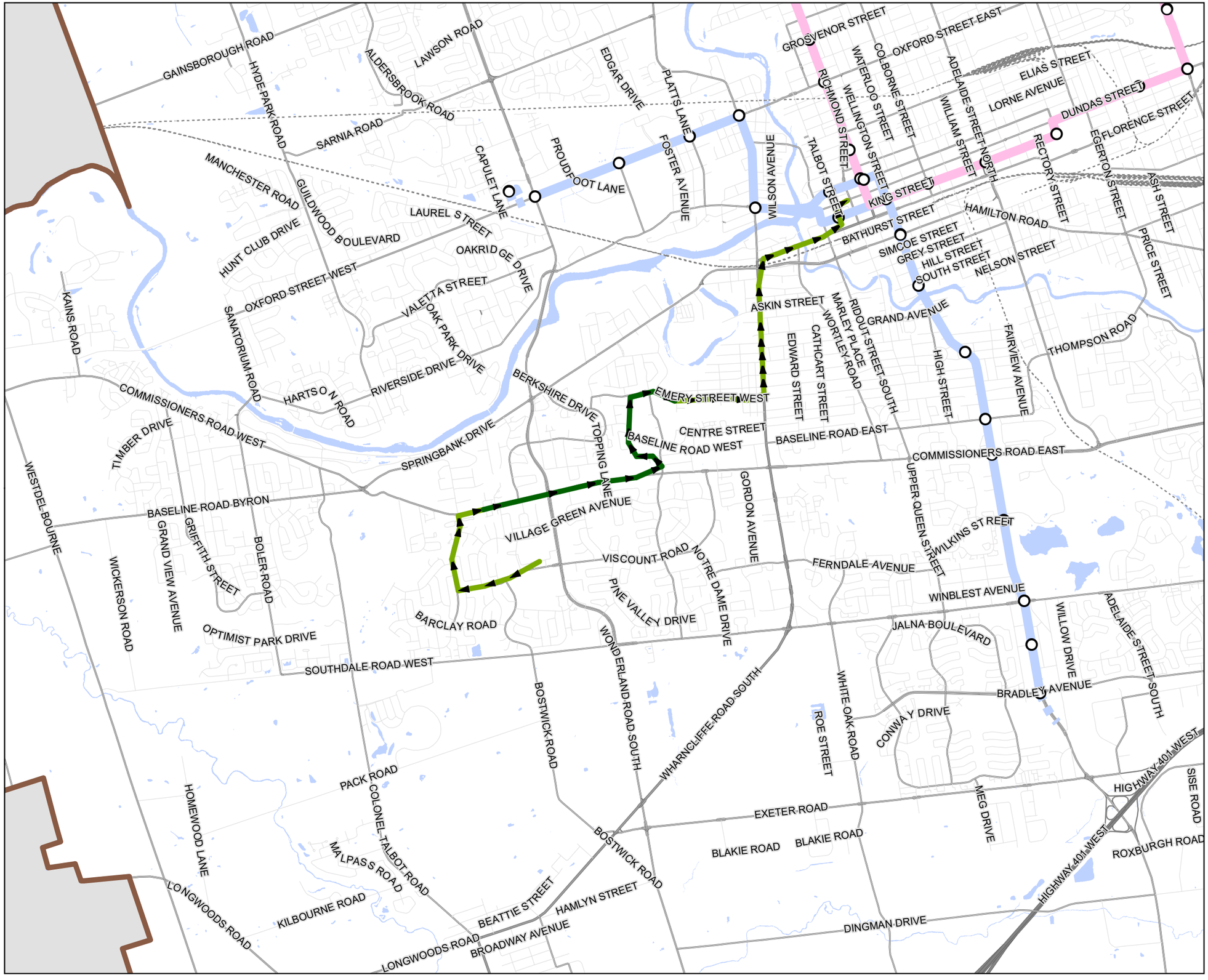
MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 188035
STATUS: FINAL
DATE: 2018-11-27



RAPID TRANSIT INTEGRATION REVIEW

2017 FALL PASSENGER PROFILE

Route: 11 Direction: I
Period: WKD PM PEAK

Passenger Profile by Route Link

- 0 - 20
- 21 - 50
- 51 - 100
- 101 - 500
- 500+
- BRT Station
- Municipal Boundary
- North-East Route
- South-West Route
- Airport Extension
- South-West Route (Mixed Traffic)
- Railway
- Waterbody

0 0.5 1 km

N W E S

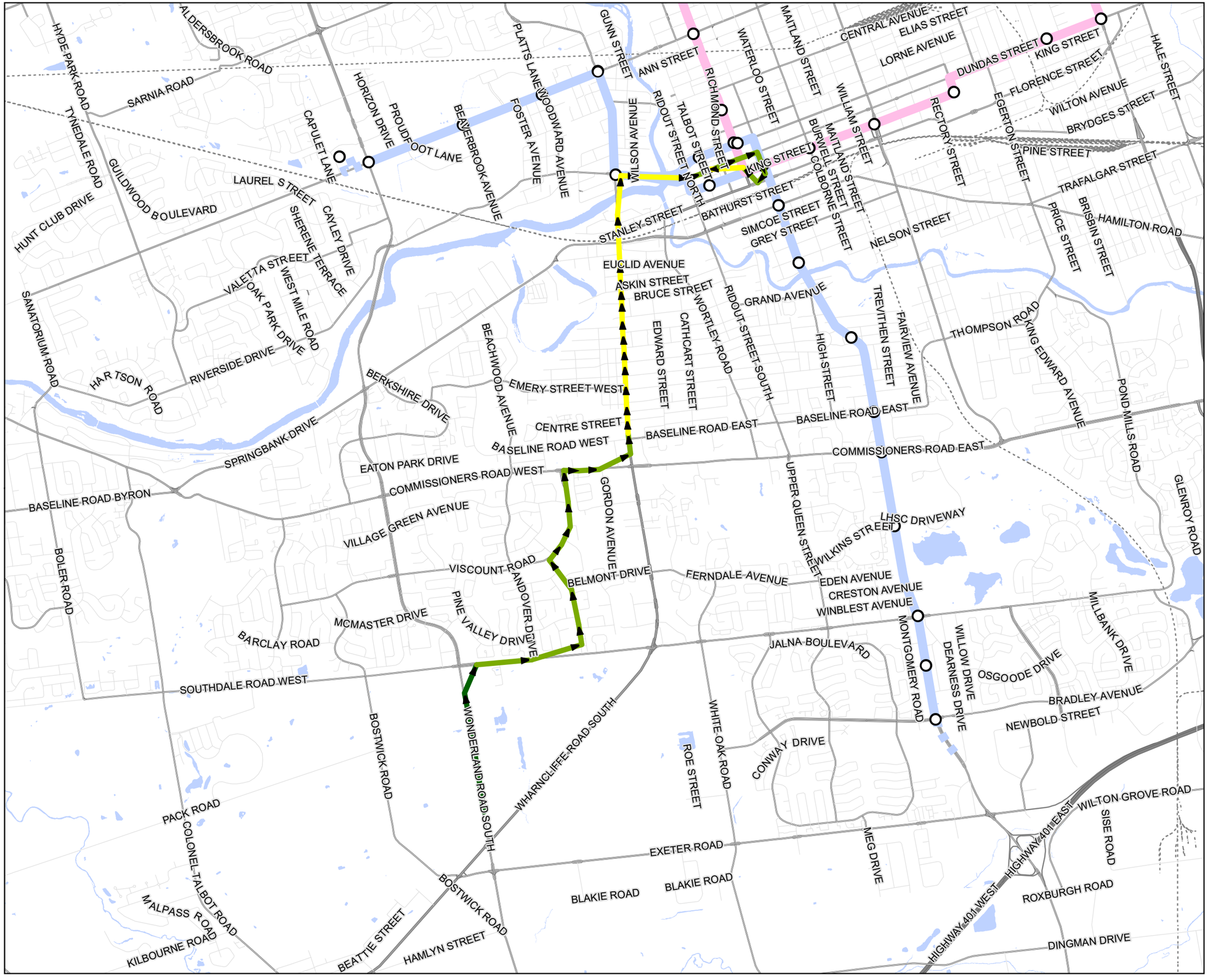
MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 188035
STATUS: FINAL
DATE: 2018-11-27



RAPID TRANSIT INTEGRATION REVIEW

2017 FALL PASSENGER PROFILE

Route: 12 Direction: I
Period: WKD PM PEAK

Passenger Profile by Route Link

- 0 - 20
- 21 - 50
- 51 - 100
- 101 - 500
- 500+
- BRT Station
- Municipal Boundary
- North-East Route
- South-West Route
- Airport Extension
- South-West Route (Mixed Traffic)
- Railway
- Waterbody

0 0.5 1 km

N W E S

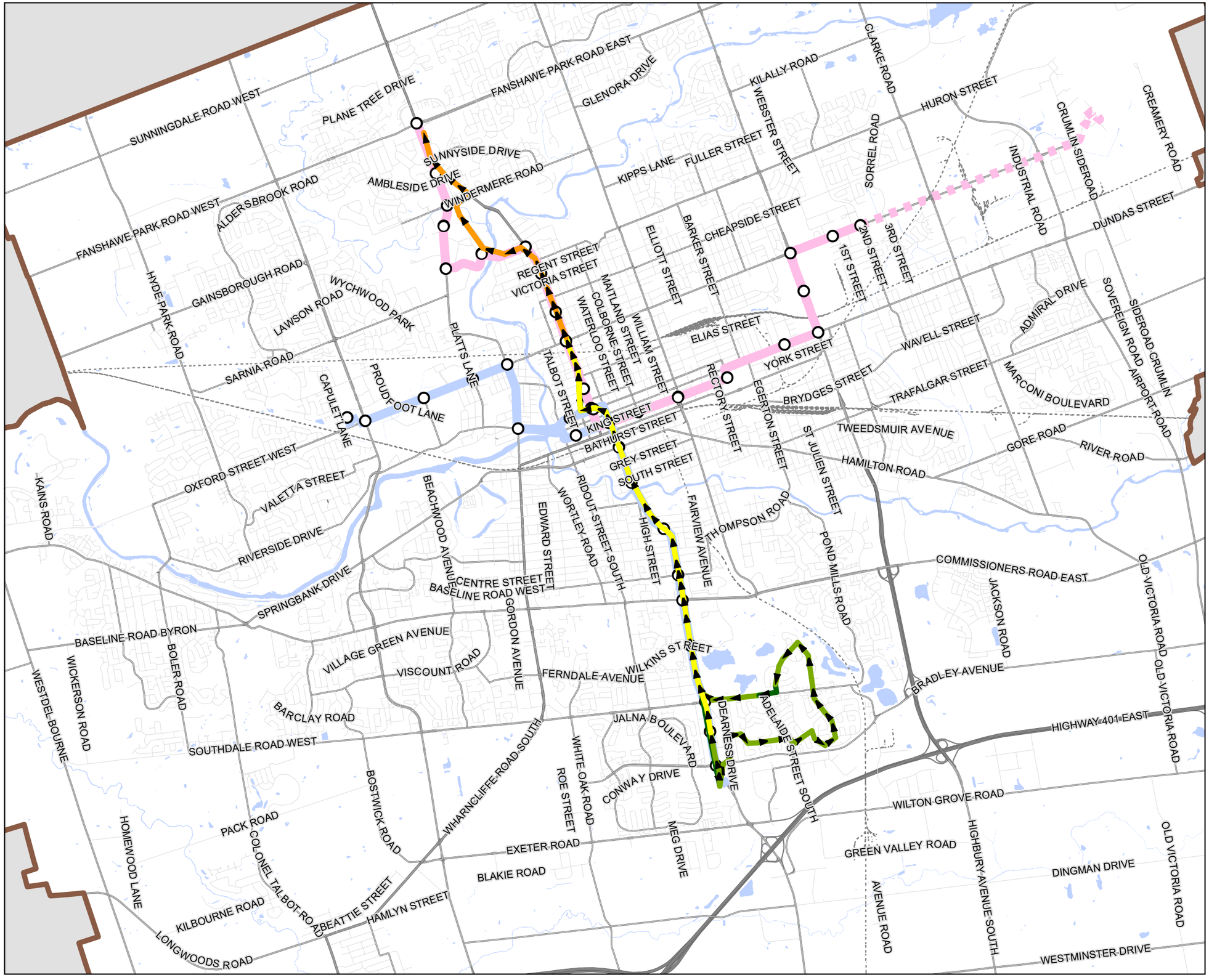
MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 188035
STATUS: FINAL
DATE: 2018-11-27



RAPID TRANSIT INTEGRATION REVIEW

2017 FALL PASSENGER PROFILE

Route: 13 Direction: I
Period: WKD PM PEAK

Passenger Profile by Route Link

- 0 - 20
- 21 - 50
- 51 - 100
- 101 - 500
- 500+
- BRT Station
- Municipal Boundary
- North-East Route
- South-West Route
- Airport Extension
- South-West Route (Mixed Traffic)
- Railway
- Waterbody

0 0.5 1 km

N W E S

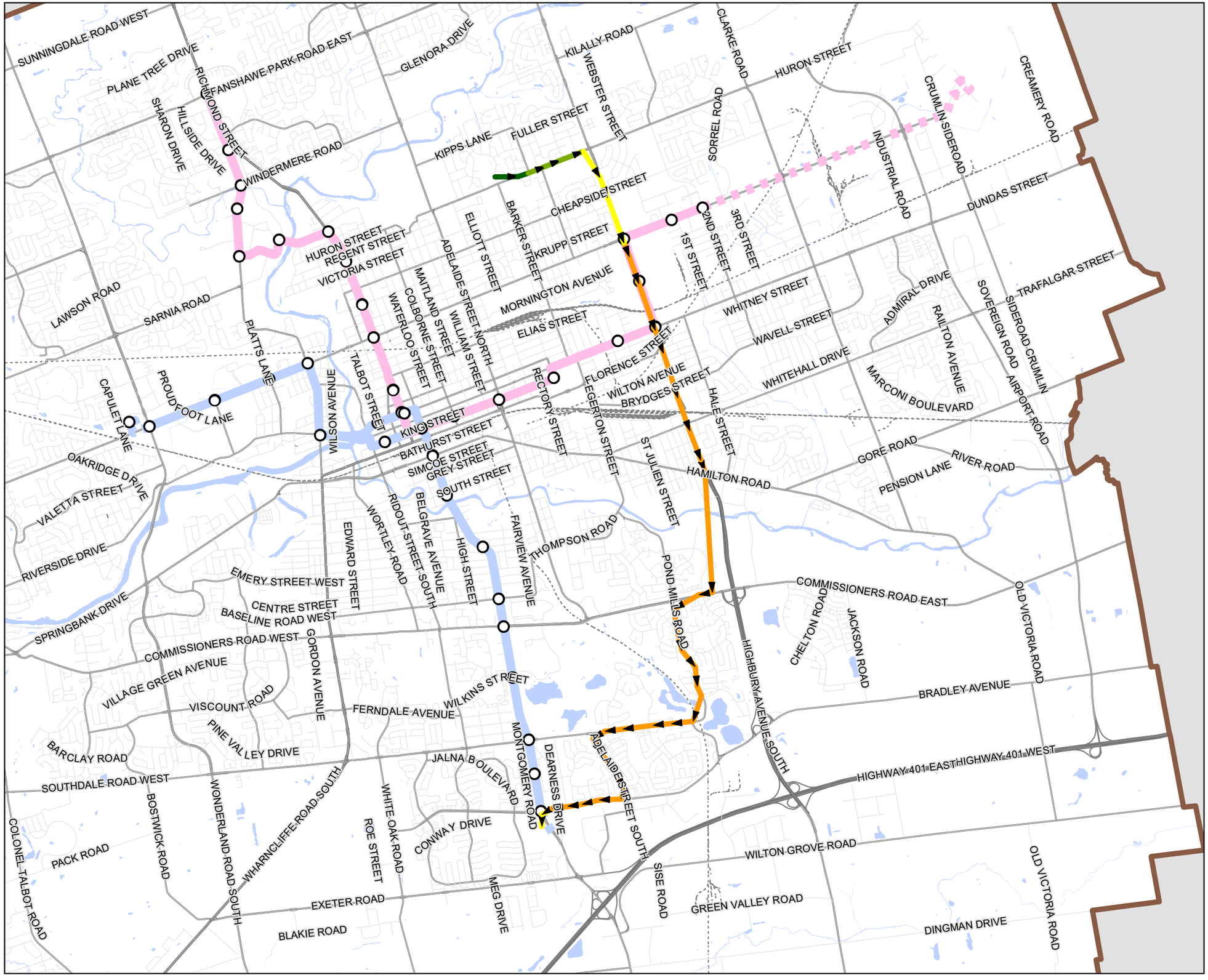
MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 188035
STATUS: FINAL
DATE: 2018-11-27



RAPID TRANSIT INTEGRATION REVIEW

2017 FALL PASSENGER PROFILE

Route: 14 Direction: I
Period: WKD PM PEAK

Passenger Profile by Route Link

- 0 - 20
- 21 - 50
- 51 - 100
- 101 - 500
- 500+
- BRT Station
- Municipal Boundary
- North-East Route
- South-West Route
- Airport Extension
- South-West Route (Mixed Traffic)
- Railway
- Waterbody

0 0.5 1 km

N W E S

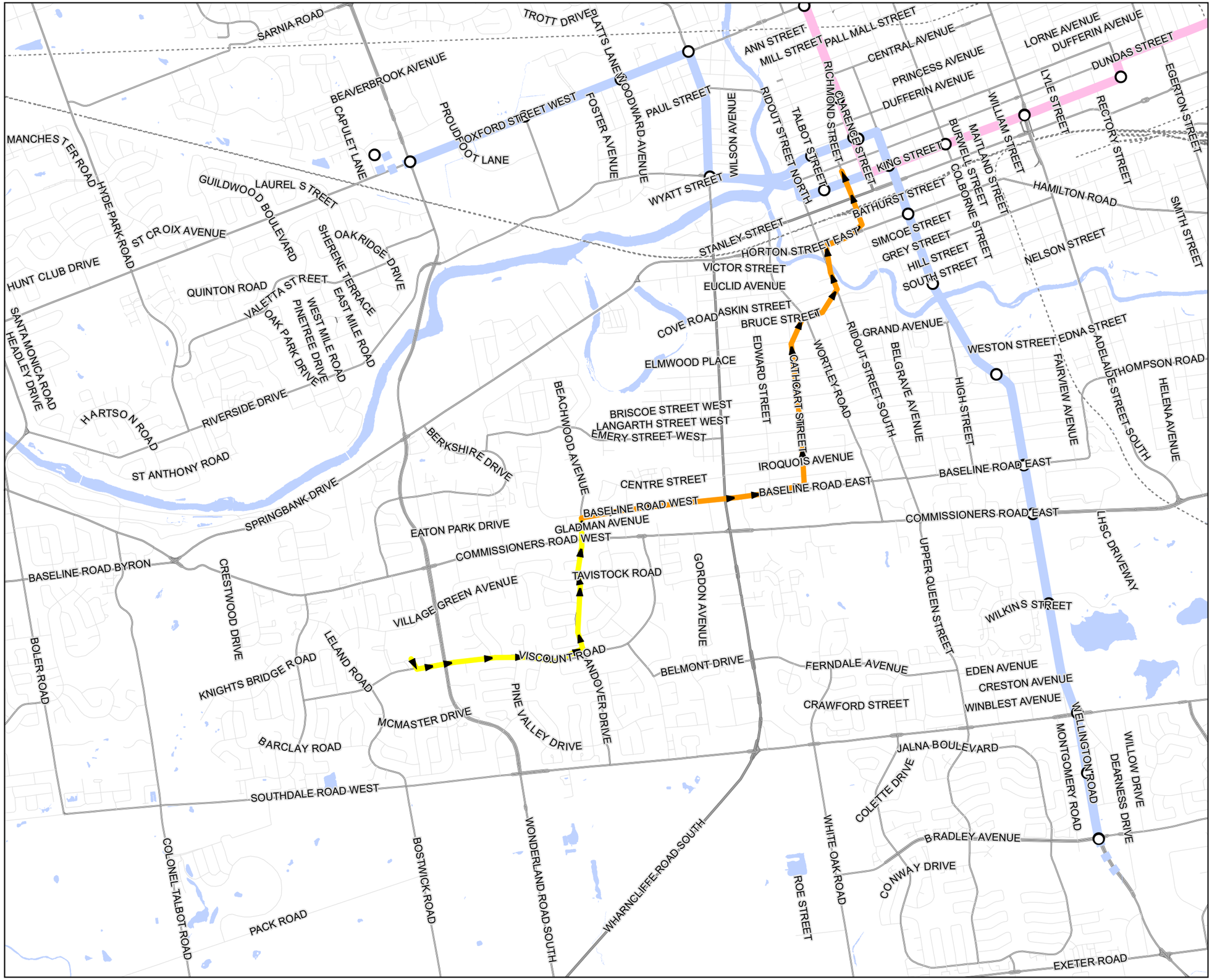
MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 188035
STATUS: FINAL
DATE: 2018-11-27



RAPID TRANSIT INTEGRATION REVIEW

2017 FALL PASSENGER PROFILE

Route: 15 Direction: I
Period: WKD PM PEAK

Passenger Profile by Route Link

- 0 - 20
- 21 - 50
- 51 - 100
- 101 - 500
- 500+
- BRT Station
- Municipal Boundary
- North-East Route
- South-West Route
- Airport Extension
- South-West Route (Mixed Traffic)
- Railway
- Waterbody

0 0.5 1 km

N W E S

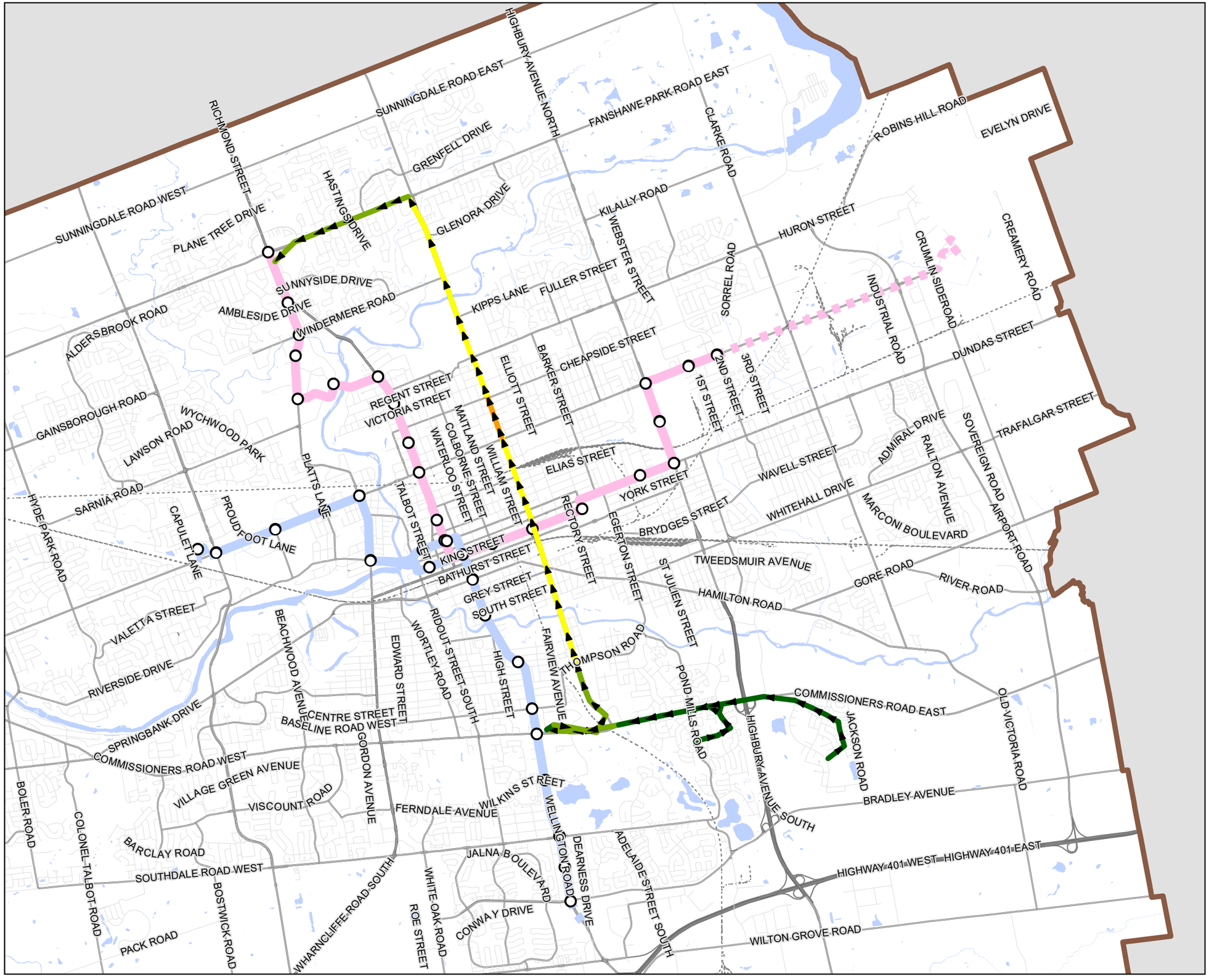
MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 188035
STATUS: FINAL
DATE: 2018-11-27



RAPID TRANSIT INTEGRATION REVIEW

2017 FALL PASSENGER PROFILE

Route: 16 Direction: I
Period: WKD PM PEAK

Passenger Profile by Route Link

- 0 - 20
- 21 - 50
- 51 - 100
- 101 - 500
- 500+
- BRT Station
- Municipal Boundary
- North-East Route
- South-West Route
- Airport Extension
- South-West Route (Mixed Traffic)
- Railway
- Waterbody

0 0.5 1 km

N W E S

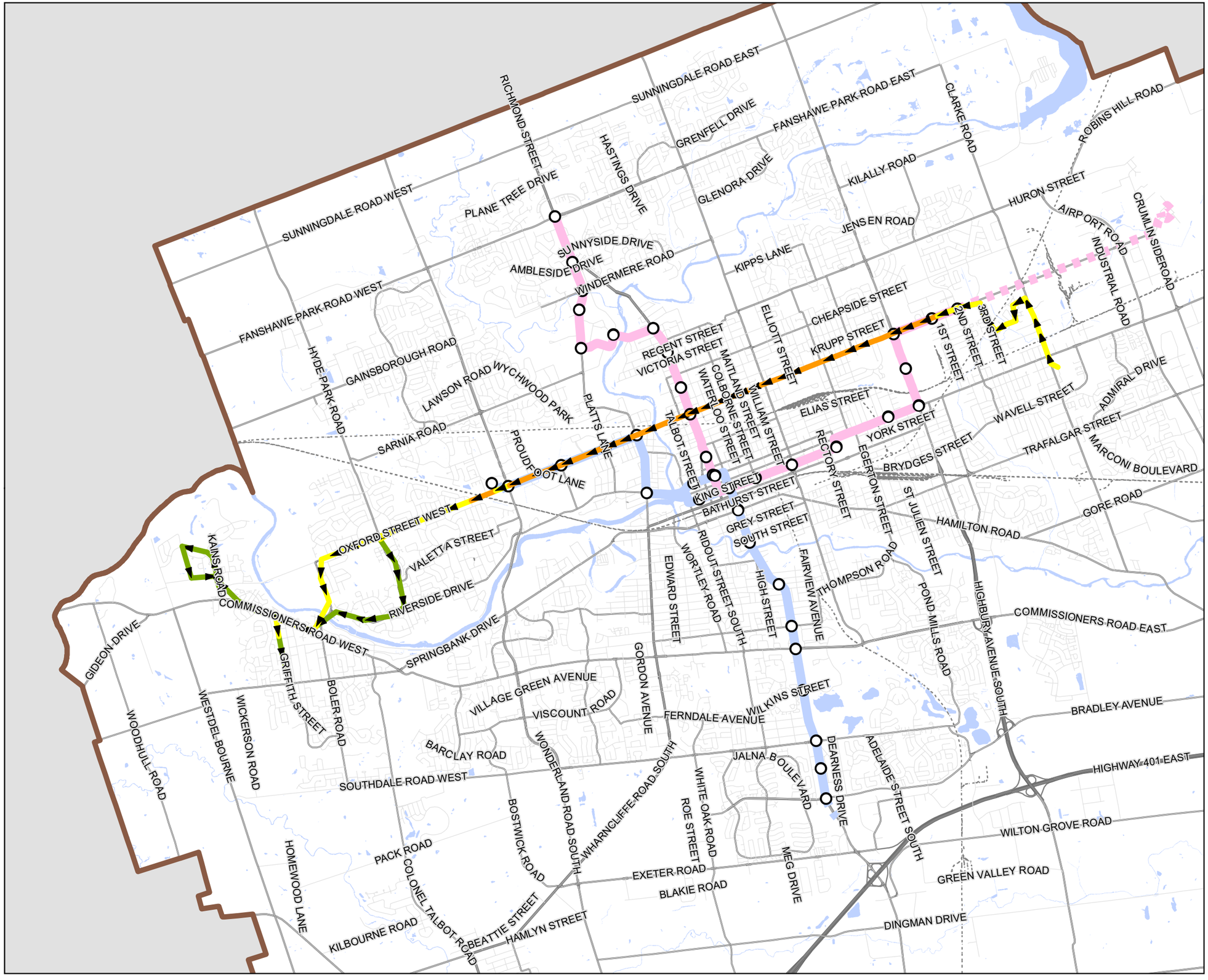
MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 188035
STATUS: FINAL
DATE: 2018-11-27



RAPID TRANSIT INTEGRATION REVIEW

2017 FALL PASSENGER PROFILE

Route: 17 Direction: I
Period: WKD PM PEAK

Passenger Profile by Route Link

- 0 - 20
- 21 - 50
- 51 - 100
- 101 - 500
- 500+
- BRT Station
- Municipal Boundary
- North-East Route
- South-West Route
- Airport Extension
- South-West Route (Mixed Traffic)
- Railway
- Waterbody

0 0.5 1 km

N W E S

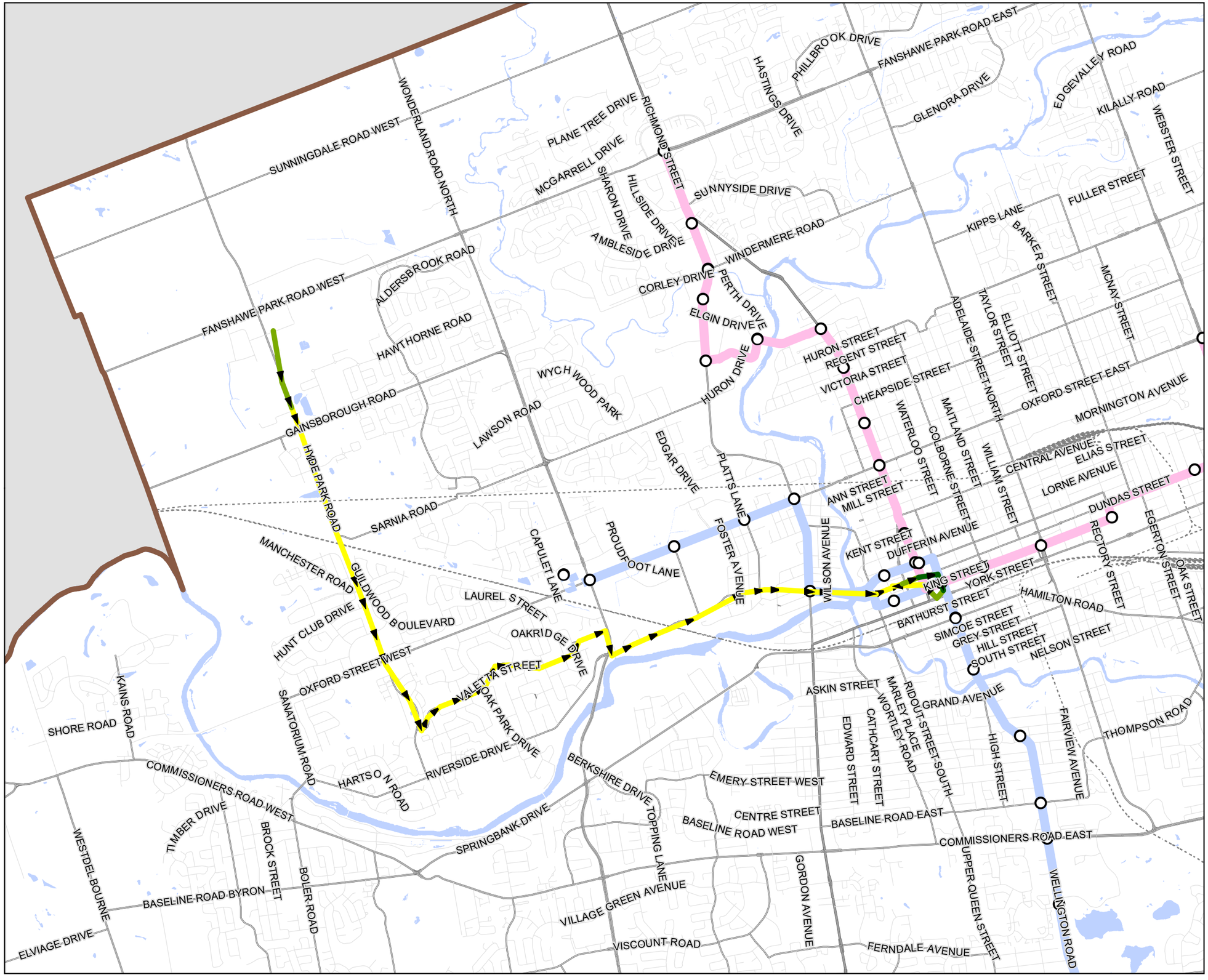
MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 188035
STATUS: FINAL
DATE: 2018-11-27



RAPID TRANSIT INTEGRATION REVIEW

2017 FALL PASSENGER PROFILE

Route: 19 Direction: 1
Period: WKD PM PEAK

Passenger Profile by Route Link

- 0 - 20
- 21 - 50
- 51 - 100
- 101 - 500
- 500+
- BRT Station
- Municipal Boundary
- North-East Route
- South-West Route
- Airport Extension
- South-West Route (Mixed Traffic)
- Railway
- Waterbody

0 0.5 1 km

MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 188035
STATUS: FINAL
DATE: 2018-11-27

RAPID TRANSIT INTEGRATION REVIEW

2017 FALL PASSENGER PROFILE

Route: 20 Direction: 1
Period: WKD PM PEAK

Passenger Profile by Route Link

- 0 - 20
- 21 - 50
- 51 - 100
- 101 - 500
- 500+
- BRT Station
- Municipal Boundary
- North-East Route
- South-West Route
- Airport Extension
- South-West Route (Mixed Traffic)
- Railway
- Waterbody

0 0.5 1 km

N W E S

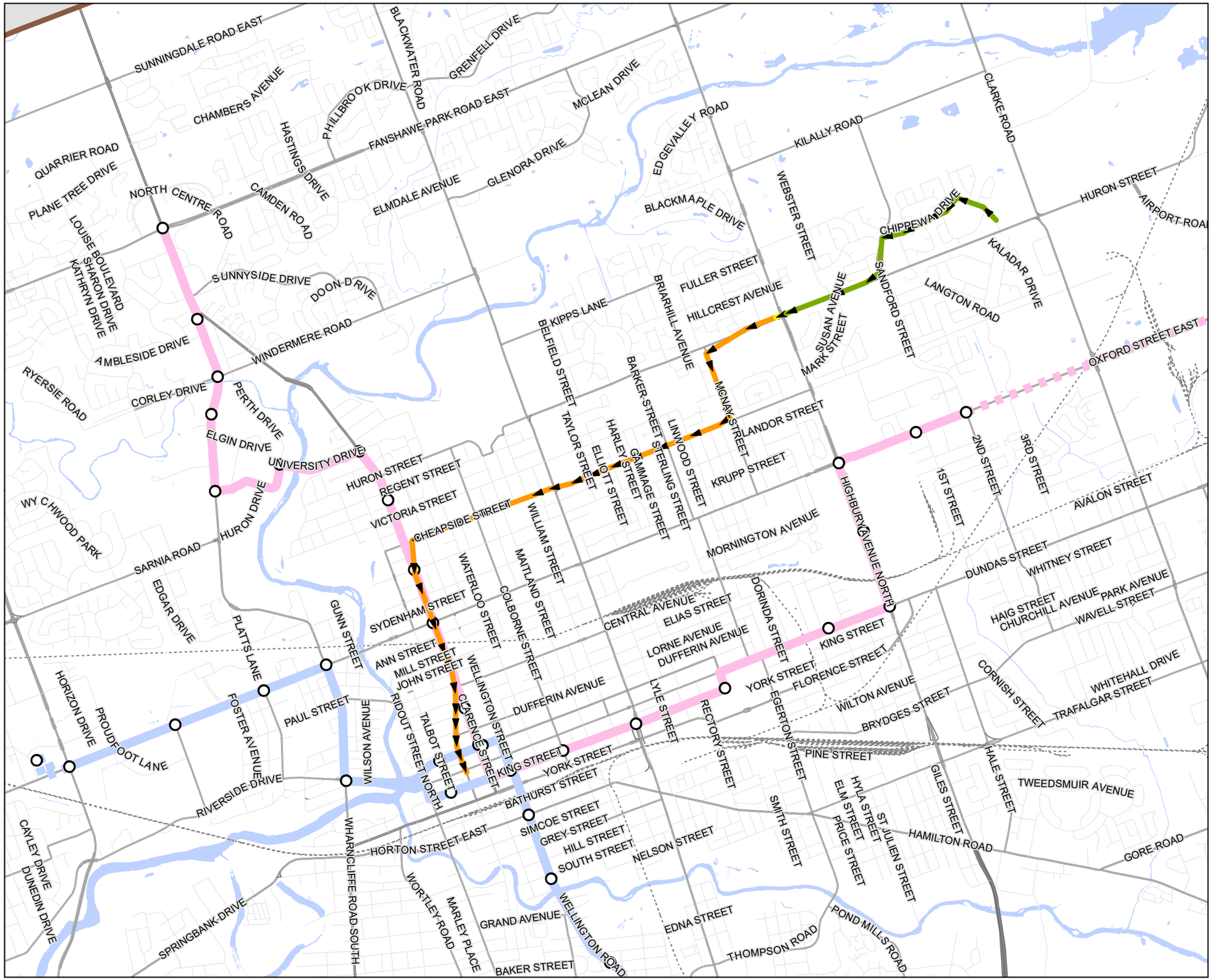
MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 188035
STATUS: FINAL
DATE: 2018-11-27



RAPID TRANSIT INTEGRATION REVIEW

2017 FALL PASSENGER PROFILE

Route: 21 Direction: I
Period: WKD PM PEAK

Passenger Profile by Route Link

- 0 - 20
- 21 - 50
- 51 - 100
- 101 - 500
- 500+
- BRT Station
- Municipal Boundary
- North-East Route
- South-West Route
- Airport Extension
- South-West Route (Mixed Traffic)
- Railway
- Waterbody

0 0.5 1 km

N W E S

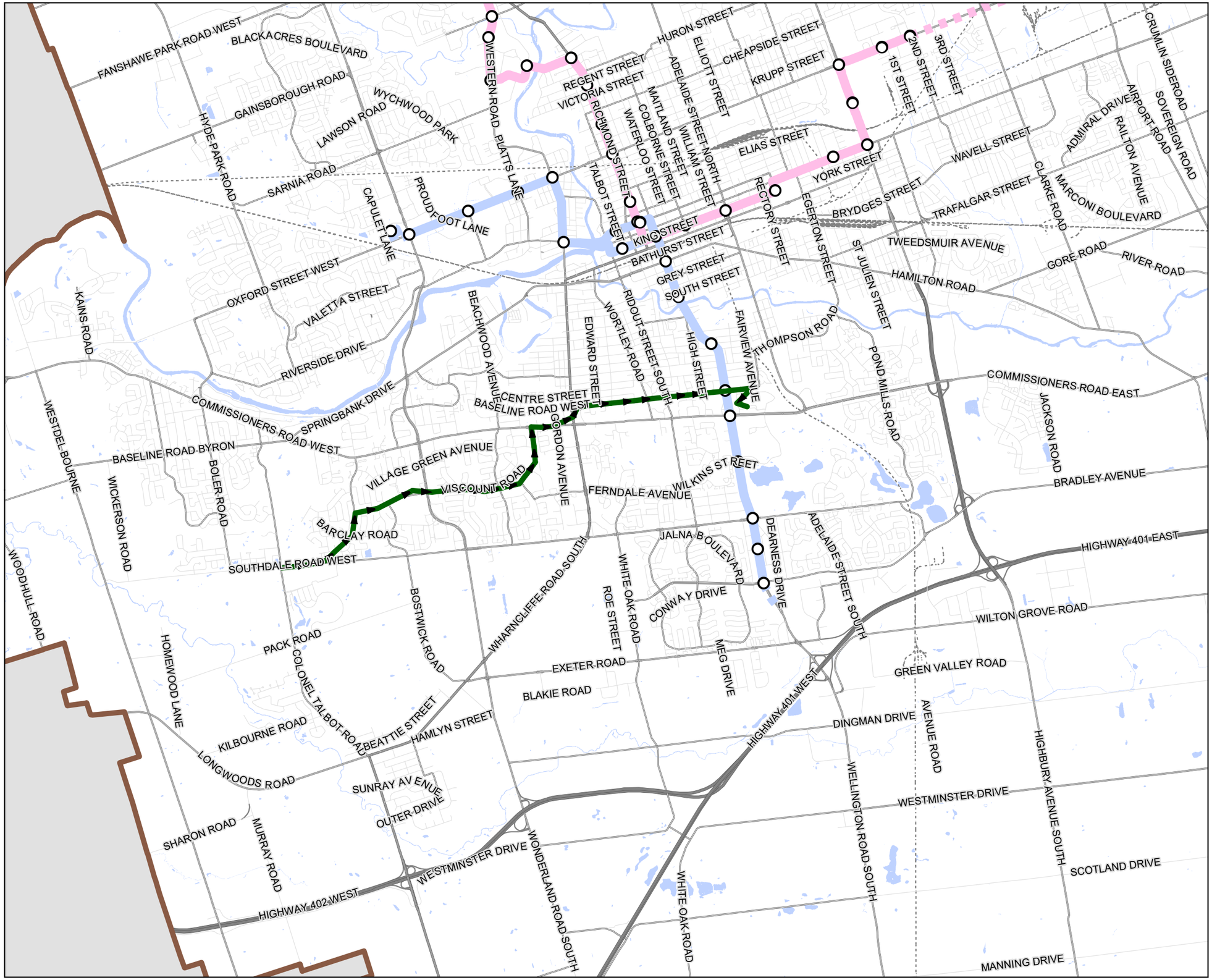
MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 188035
STATUS: FINAL
DATE: 2018-11-27



RAPID TRANSIT INTEGRATION REVIEW

2017 FALL PASSENGER PROFILE

Route: 24 Direction: I
Period: WKD PM PEAK

Passenger Profile by Route Link

- 0 - 20
- 21 - 50
- 51 - 100
- 101 - 500
- 500+
- BRT Station
- Municipal Boundary
- North-East Route
- South-West Route
- Airport Extension
- South-West Route (Mixed Traffic)
- Railway
- Waterbody

0 0.5 1 km

N W E S

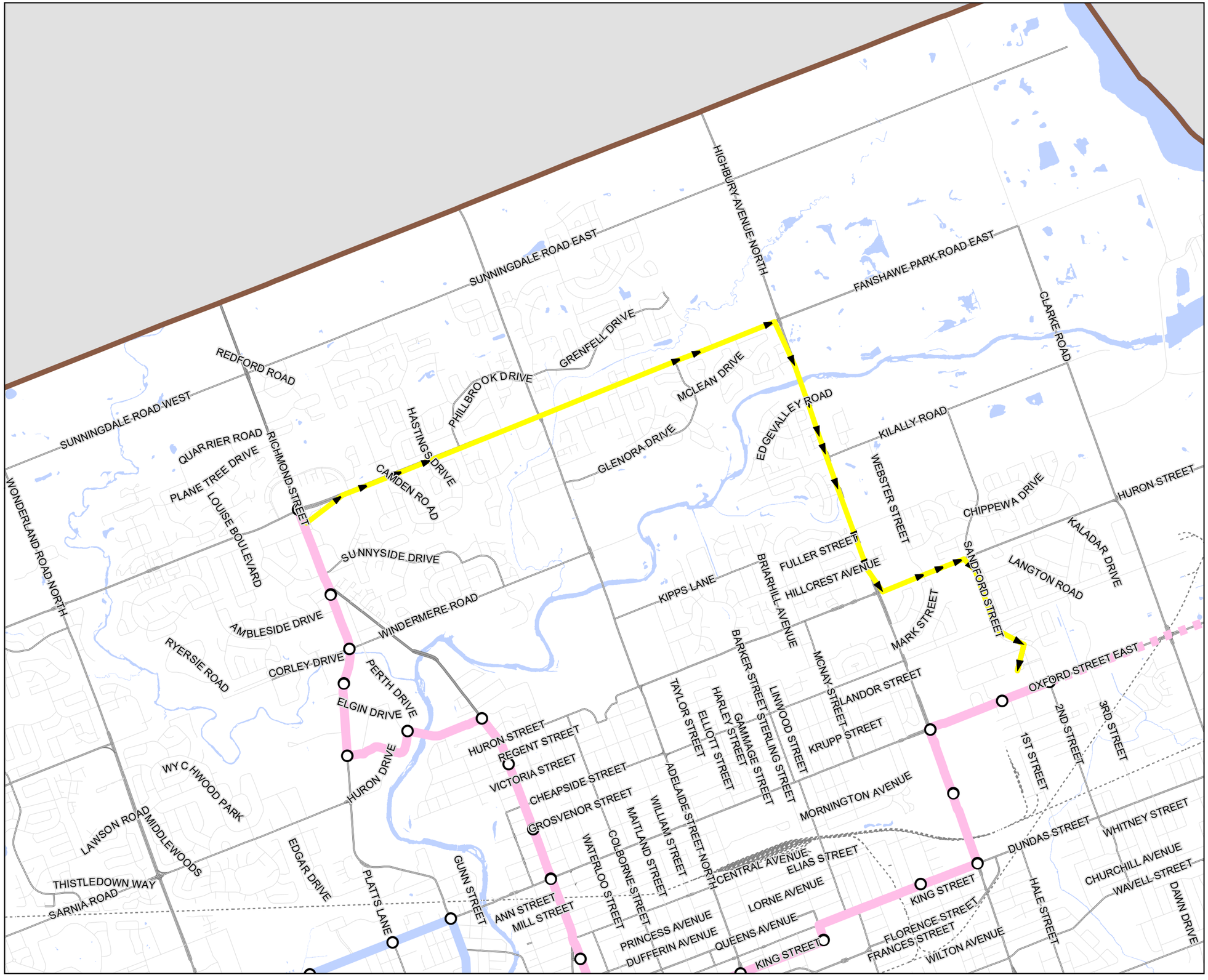
MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 188035
STATUS: FINAL
DATE: 2018-11-27



RAPID TRANSIT INTEGRATION REVIEW

2017 FALL PASSENGER PROFILE

Route: 25 Direction: I
Period: WKD PM PEAK

Passenger Profile by Route Link

- 0 - 20
- 21 - 50
- 51 - 100
- 101 - 500
- 500+
- BRT Station
- Municipal Boundary
- North-East Route
- South-West Route
- Airport Extension
- South-West Route (Mixed Traffic)
- Railway
- Waterbody

0 0.5 1 km

N W E S

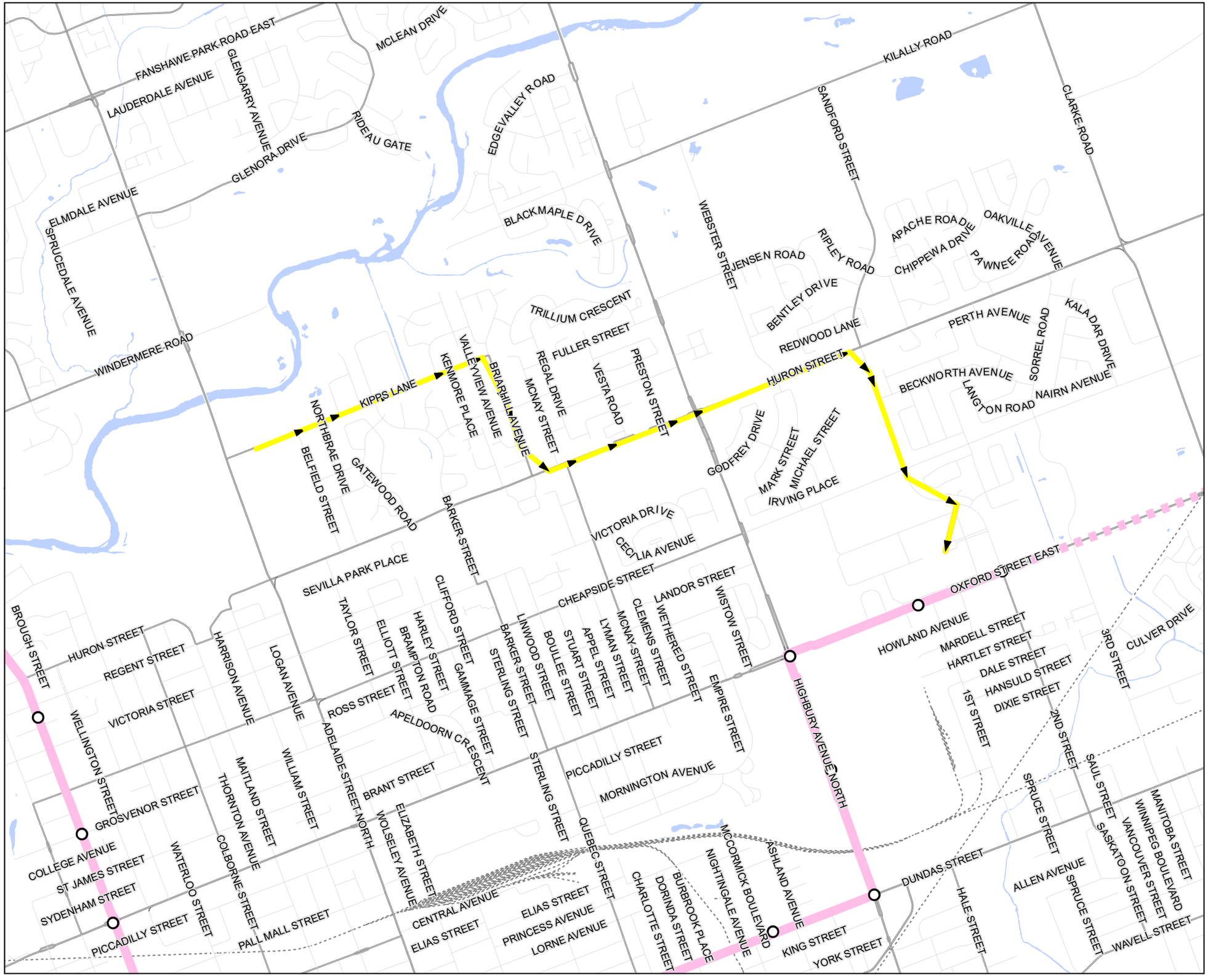
MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 188035
STATUS: FINAL
DATE: 2018-11-27



RAPID TRANSIT INTEGRATION REVIEW

2017 FALL PASSENGER PROFILE

Route: 27 Direction: I
Period: WKD PM PEAK

Passenger Profile by Route Link

- 0 - 20
- 21 - 50
- 51 - 100
- 101 - 500
- 500+
- BRT Station
- Municipal Boundary
- North-East Route
- South-West Route
- Airport Extension
- South-West Route (Mixed Traffic)
- Railway
- Waterbody

0 0.5 1 km

N W E S

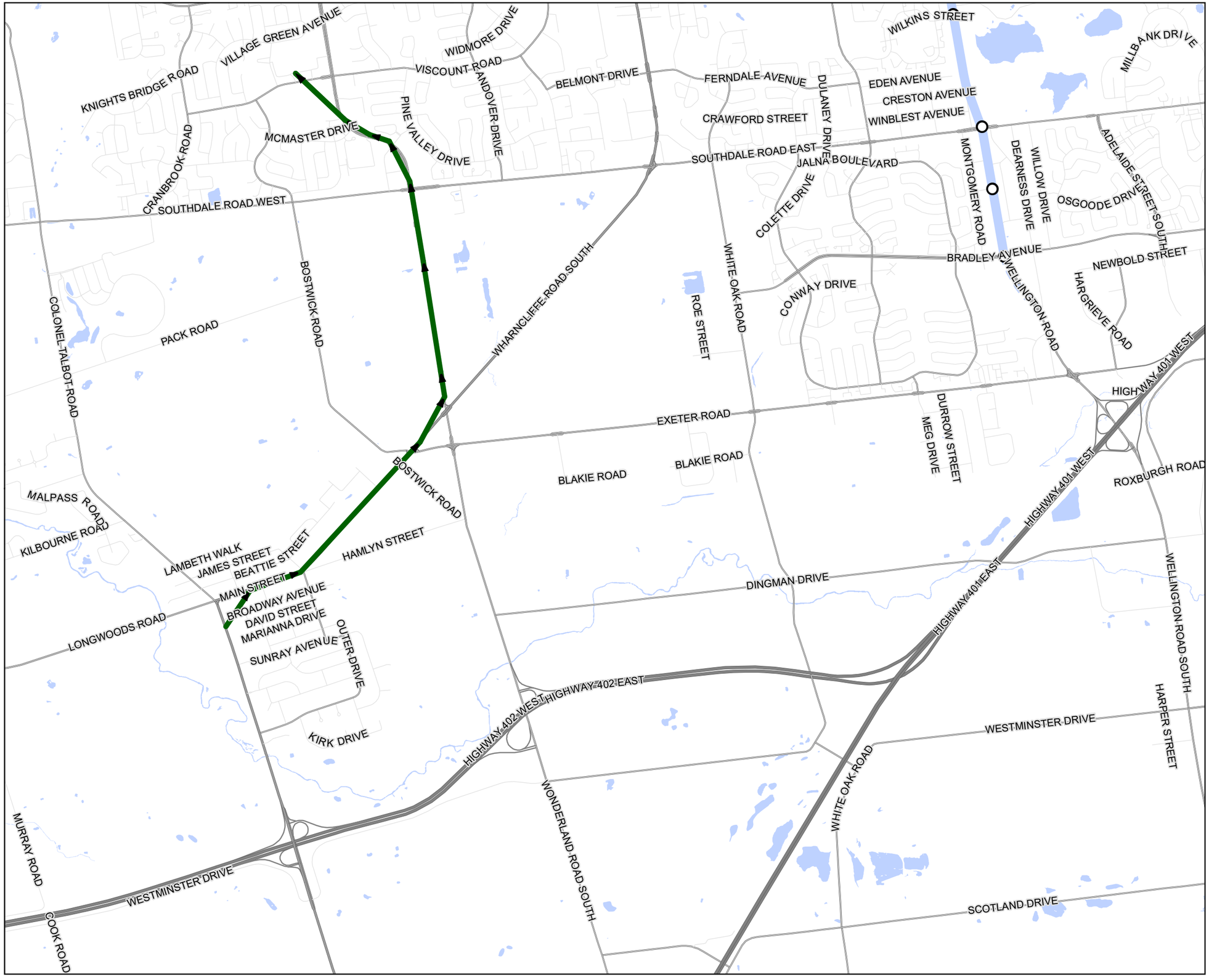
MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 188035
STATUS: FINAL
DATE: 2018-11-27



RAPID TRANSIT INTEGRATION REVIEW

2017 FALL PASSENGER PROFILE

Route: 28 Direction: I
Period: WKD PM PEAK

Passenger Profile by Route Link

- 0 - 20
- 21 - 50
- 51 - 100
- 101 - 500
- 500+
- BRT Station
- Municipal Boundary
- North-East Route
- South-West Route
- Airport Extension
- South-West Route (Mixed Traffic)
- Railway
- Waterbody

0 0.5 1 km

N W E S

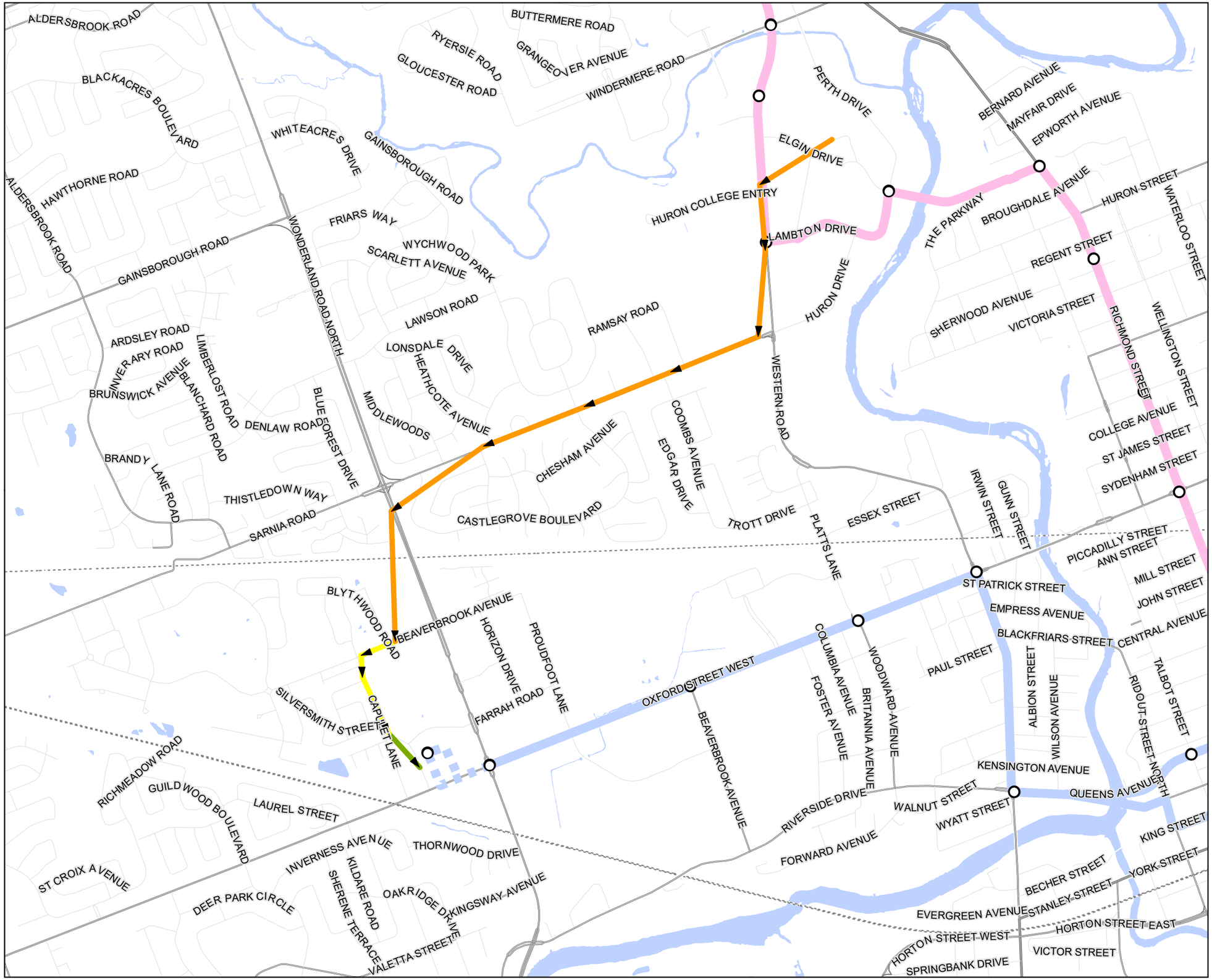
MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 188035
STATUS: FINAL
DATE: 2018-11-27



RAPID TRANSIT INTEGRATION REVIEW

2017 FALL PASSENGER PROFILE

Route: 29 Direction: I
Period: WKD PM PEAK

Passenger Profile by Route Link

- 0 - 20
- 21 - 50
- 51 - 100
- 101 - 500
- 500+
- BRT Station
- Municipal Boundary
- North-East Route
- South-West Route
- Airport Extension
- South-West Route (Mixed Traffic)
- Railway
- Waterbody

0 0.5 1 km

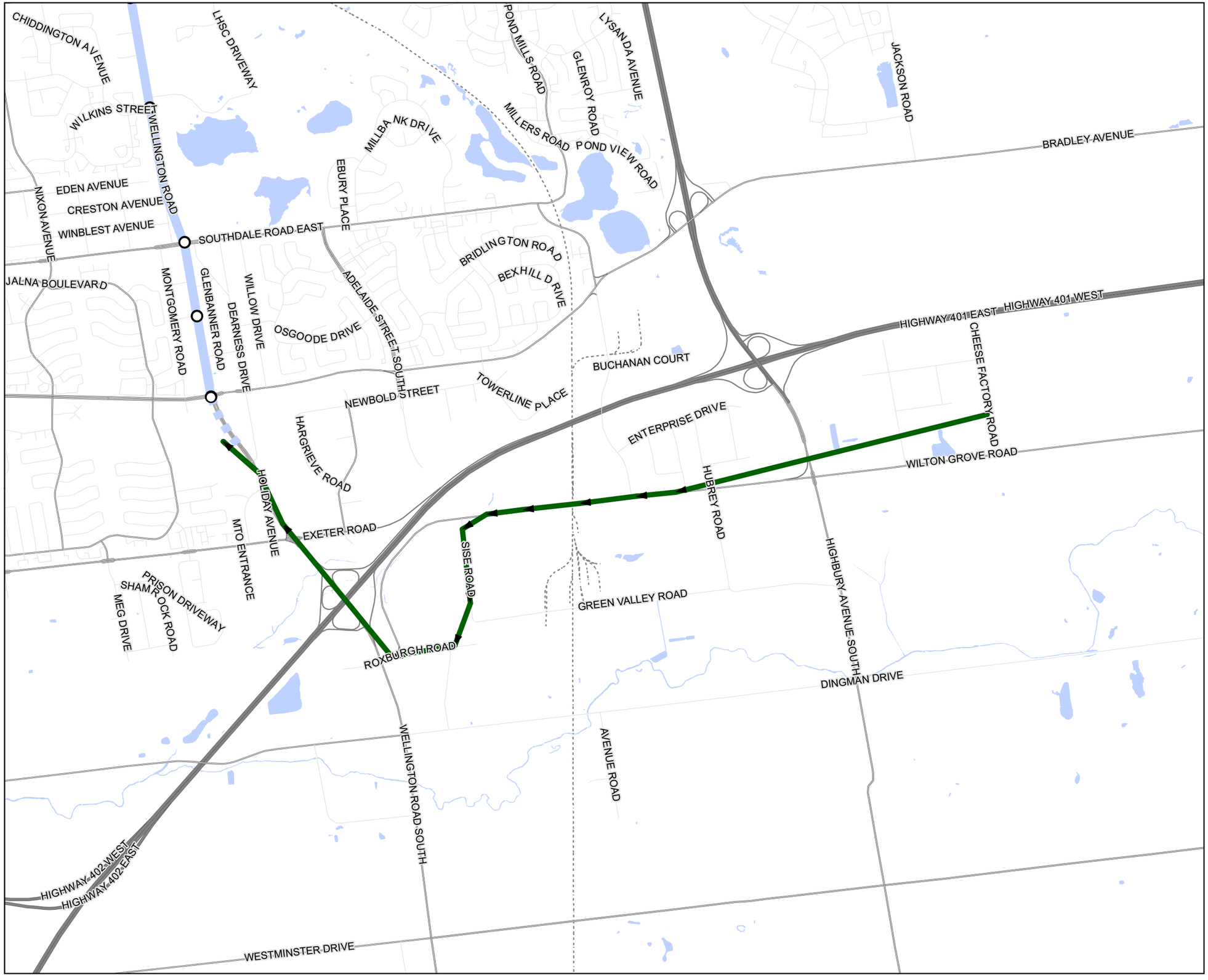
MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 188035
STATUS: FINAL
DATE: 2018-11-27



RAPID TRANSIT INTEGRATION REVIEW

2017 FALL PASSENGER PROFILE

Route: 30 Direction: I
Period: WKD PM PEAK

Passenger Profile by Route Link

- 0 - 20
- 21 - 50
- 51 - 100
- 101 - 500
- 500+
- BRT Station
- Municipal Boundary
- North-East Route
- South-West Route
- Airport Extension
- South-West Route (Mixed Traffic)
- Railway
- Waterbody

0 0.5 1 km

N W E S

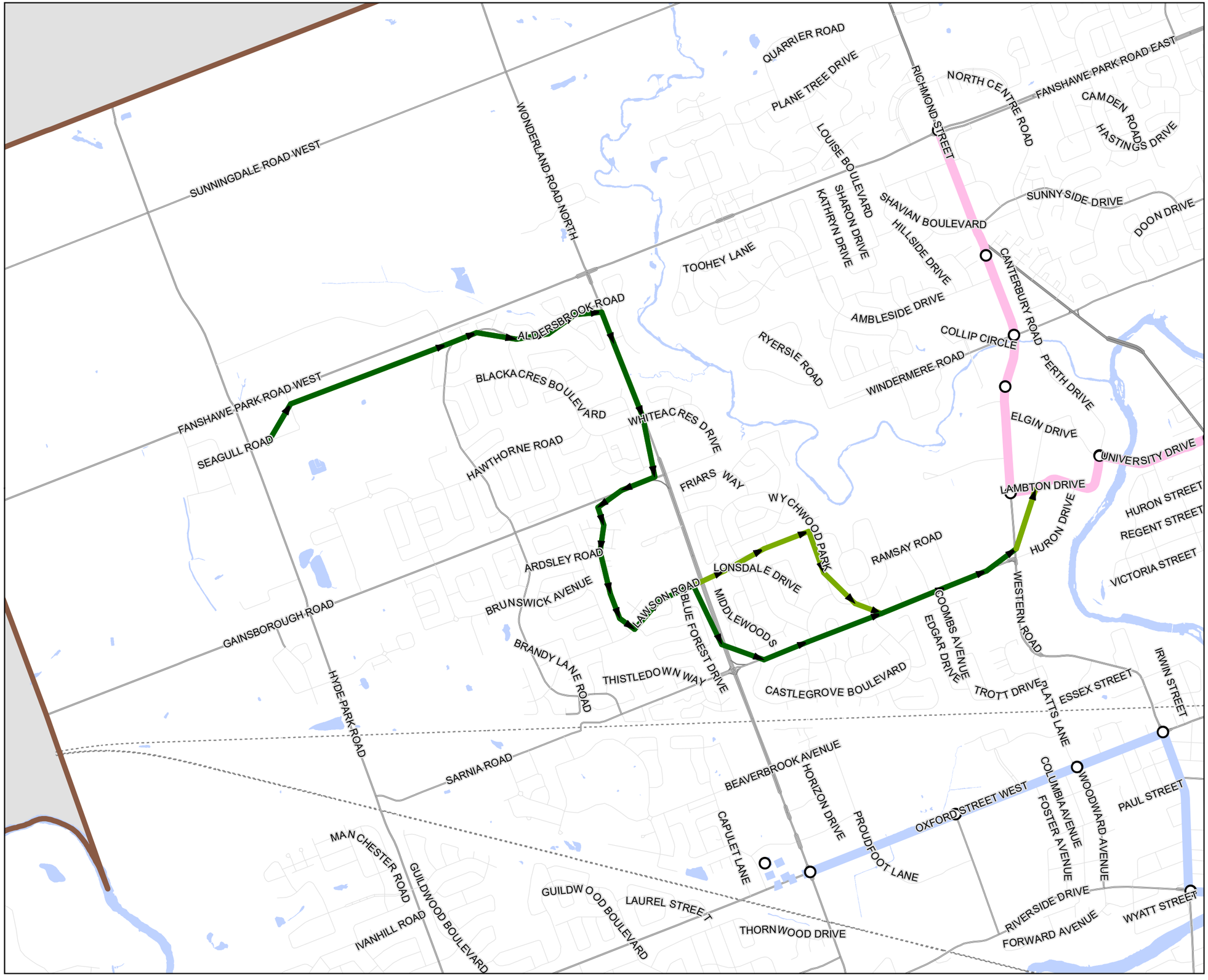
MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 188035
STATUS: FINAL
DATE: 2018-11-27



RAPID TRANSIT INTEGRATION REVIEW

2017 FALL PASSENGER PROFILE

Route: 31 Direction: I
Period: WKD PM PEAK

Passenger Profile by Route Link

- 0 - 20
- 21 - 50
- 51 - 100
- 101 - 500
- 500+
- BRT Station
- Municipal Boundary
- North-East Route
- South-West Route
- Airport Extension
- South-West Route (Mixed Traffic)
- Railway
- Waterbody

0 0.5 1 km

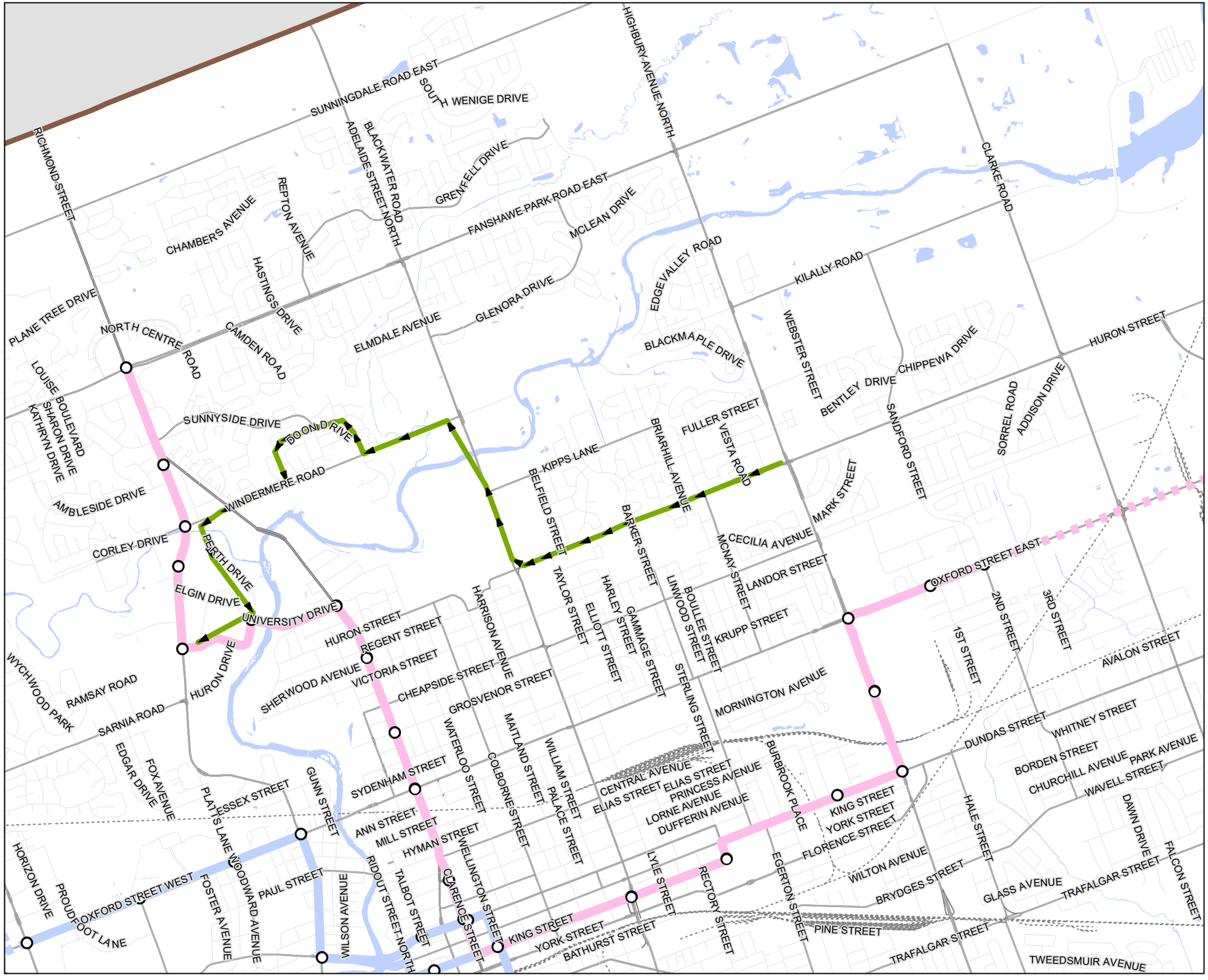
MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 188035
STATUS: FINAL
DATE: 2018-11-27



RAPID TRANSIT INTEGRATION REVIEW

2017 FALL PASSENGER PROFILE

Route: 32 Direction: I
Period: WKD PM PEAK

Passenger Profile by Route Link

- 0 - 20
- 21 - 50
- 51 - 100
- 101 - 500
- 500+
- BRT Station
- Municipal Boundary
- North-East Route
- South-West Route
- Airport Extension
- South-West Route (Mixed Traffic)
- Railway
- Waterbody

0 0.5 1 km

N W E S

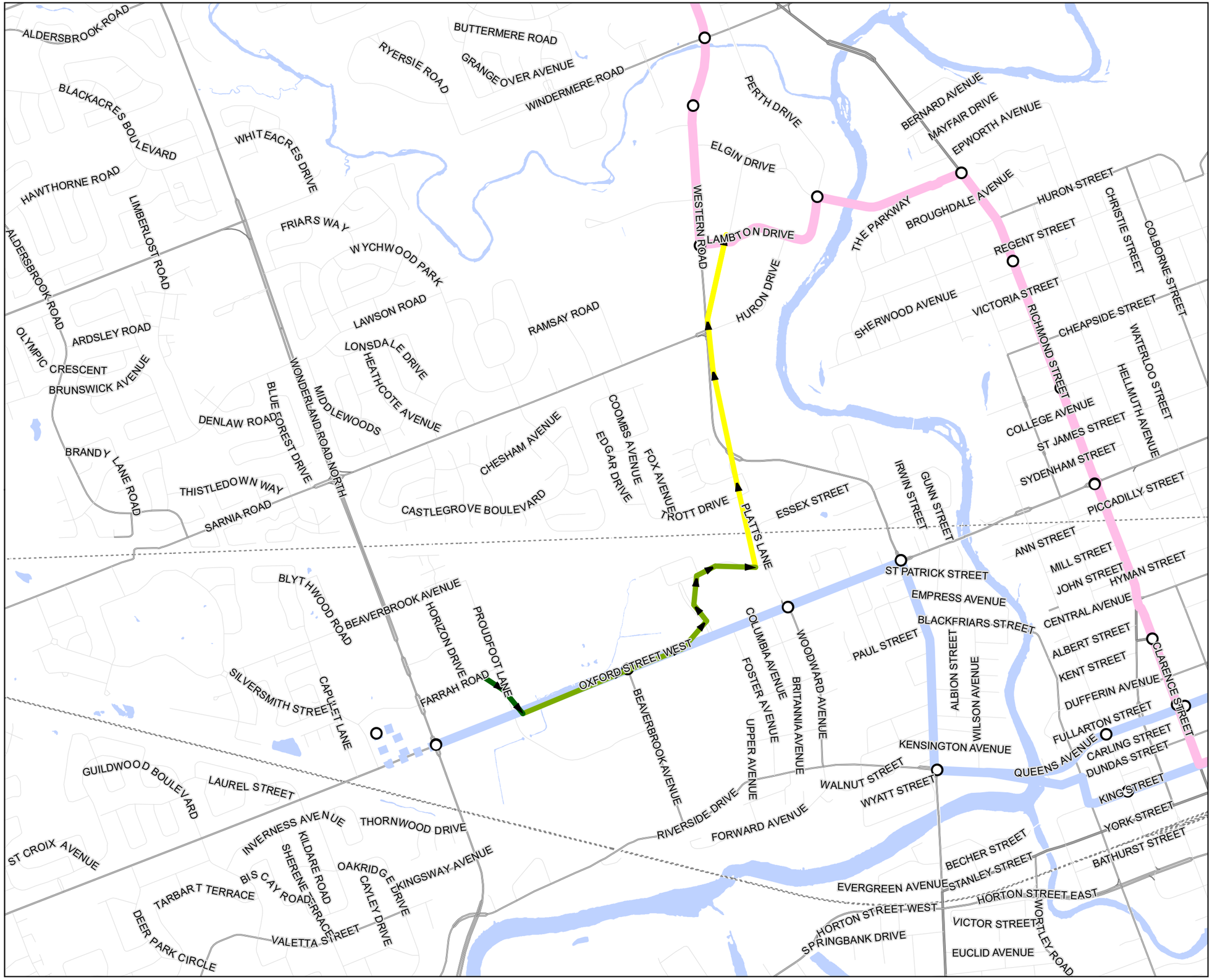
MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 188035
STATUS: FINAL
DATE: 2018-11-27



RAPID TRANSIT INTEGRATION REVIEW

2017 FALL PASSENGER PROFILE

Route: 33 Direction: I
Period: WKD PM PEAK

Passenger Profile by Route Link

- 0 - 20
- 21 - 50
- 51 - 100
- 101 - 500
- 500+
- BRT Station
- Municipal Boundary
- North-East Route
- South-West Route
- Airport Extension
- South-West Route (Mixed Traffic)
- Railway
- Waterbody

0 0.5 1 km

N W E S

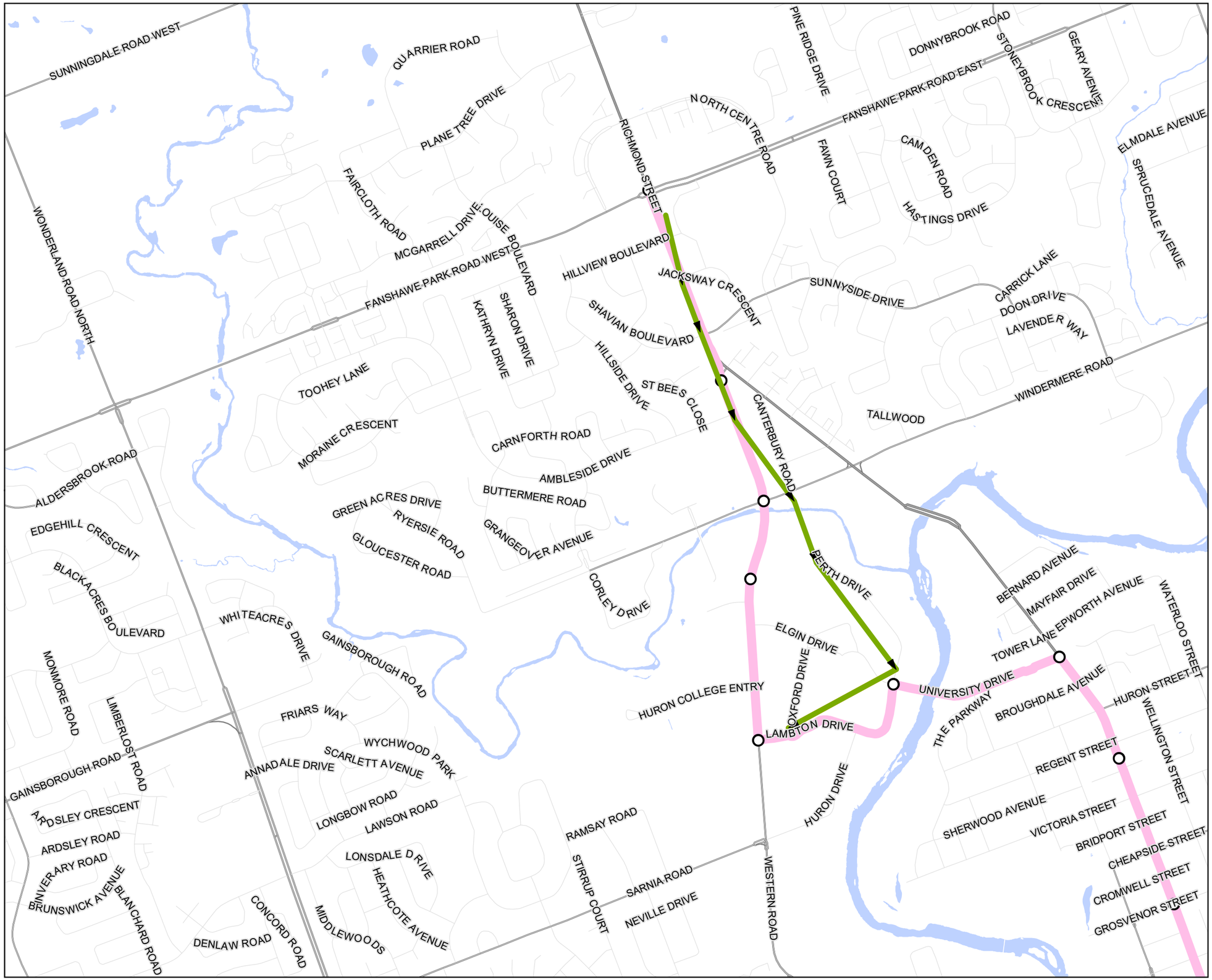
MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 188035
STATUS: FINAL
DATE: 2018-11-27



RAPID TRANSIT INTEGRATION REVIEW

2017 FALL PASSENGER PROFILE

Route: 34 Direction: I
Period: WKD PM PEAK

Passenger Profile by Route Link

- 0 - 20
- 21 - 50
- 51 - 100
- 101 - 500
- 500+
- BRT Station
- Municipal Boundary
- North-East Route
- South-West Route
- Airport Extension
- South-West Route (Mixed Traffic)
- Railway
- Waterbody

0 0.5 1 Km

N E S W

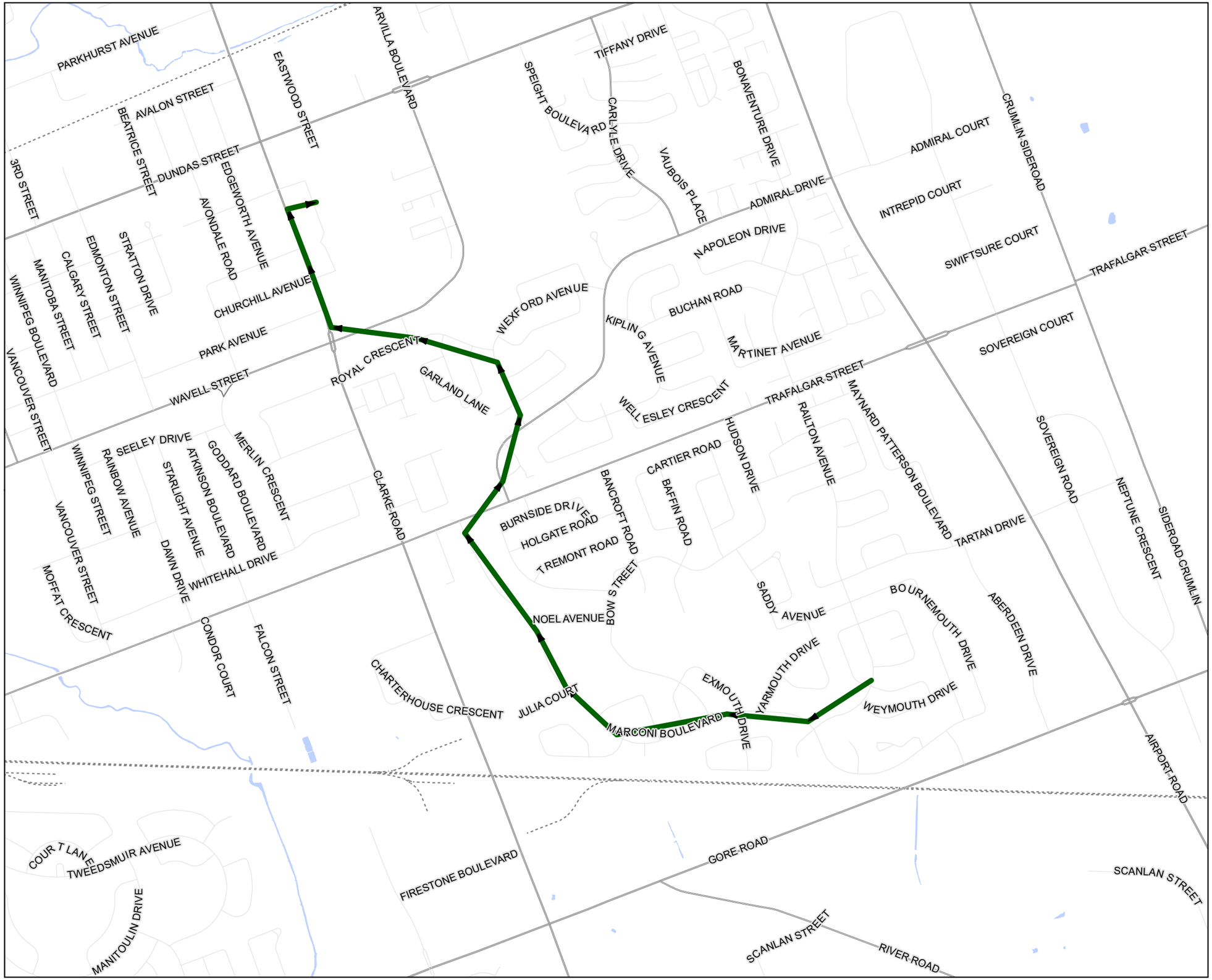
MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 188035
STATUS: FINAL
DATE: 2018-11-27



RAPID TRANSIT INTEGRATION REVIEW

2017 FALL PASSENGER PROFILE

Route: 35 Direction: I
Period: WKD PM PEAK

Passenger Profile by Route Link

- 0 - 20
- 21 - 50
- 51 - 100
- 101 - 500
- 500+
- BRT Station
- Municipal Boundary
- North-East Route
- South-West Route
- Airport Extension
- South-West Route (Mixed Traffic)
- Railway
- Waterbody

0 0.5 1 km

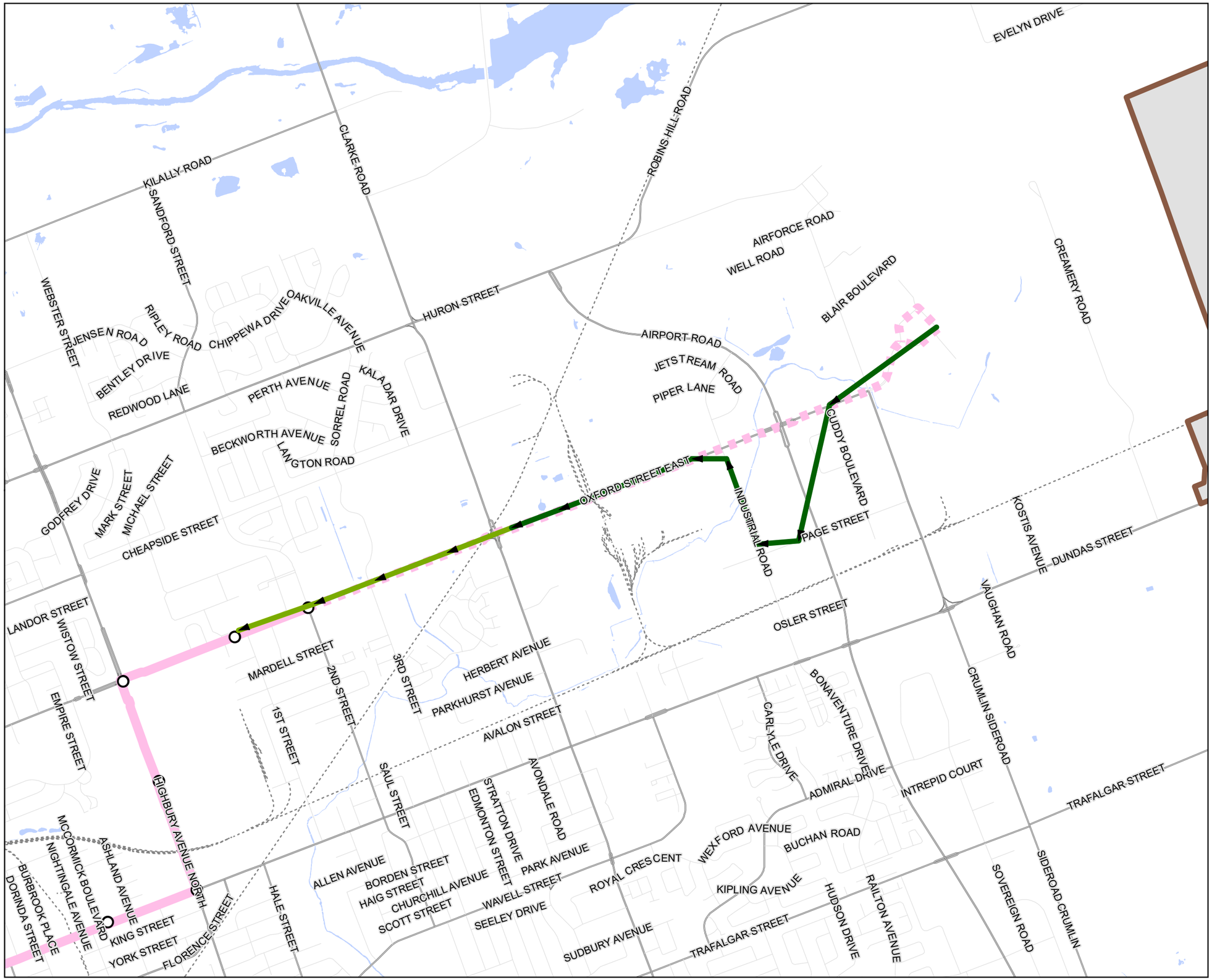
MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 188035
STATUS: FINAL
DATE: 2018-11-27



RAPID TRANSIT INTEGRATION REVIEW

2017 FALL PASSENGER PROFILE

Route: 36 Direction: I
Period: WKD PM PEAK

Passenger Profile by Route Link

- 0 - 20
- 21 - 50
- 51 - 100
- 101 - 500
- 500+
- BRT Station
- Municipal Boundary
- North-East Route
- South-West Route
- Airport Extension
- South-West Route (Mixed Traffic)
- Railway
- Waterbody

0 0.5 1 km

N W E S

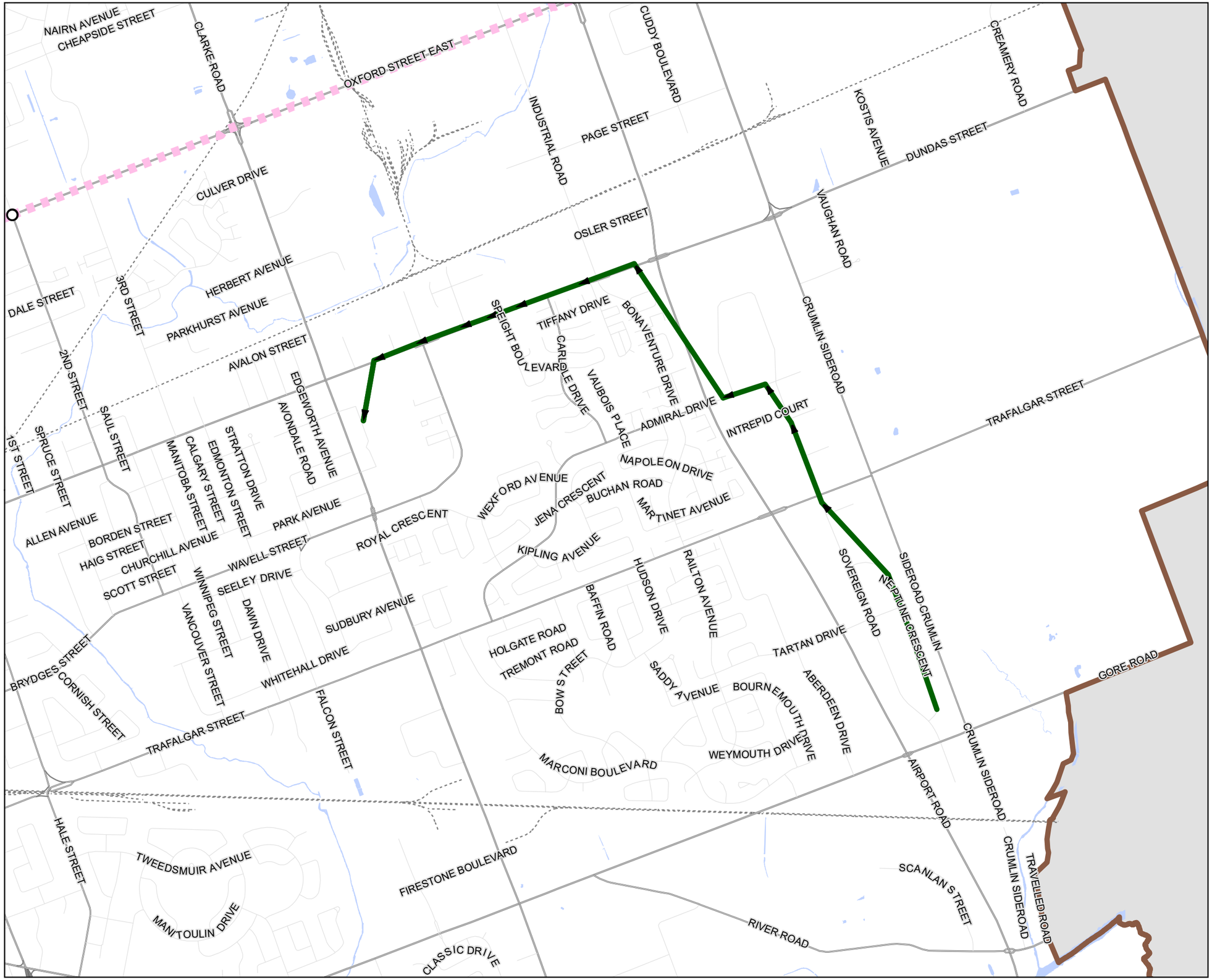
MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 188035
STATUS: FINAL
DATE: 2018-11-27



RAPID TRANSIT INTEGRATION REVIEW

2017 FALL PASSENGER PROFILE

Route: 37 Direction: I
Period: WKD PM PEAK

Passenger Profile by Route Link

- 0 - 20
- 21 - 50
- 51 - 100
- 101 - 500
- 500+
- BRT Station
- Municipal Boundary
- North-East Route
- South-West Route
- Airport Extension
- South-West Route (Mixed Traffic)
- Railway
- Waterbody

0 0.5 1 km

N W E S

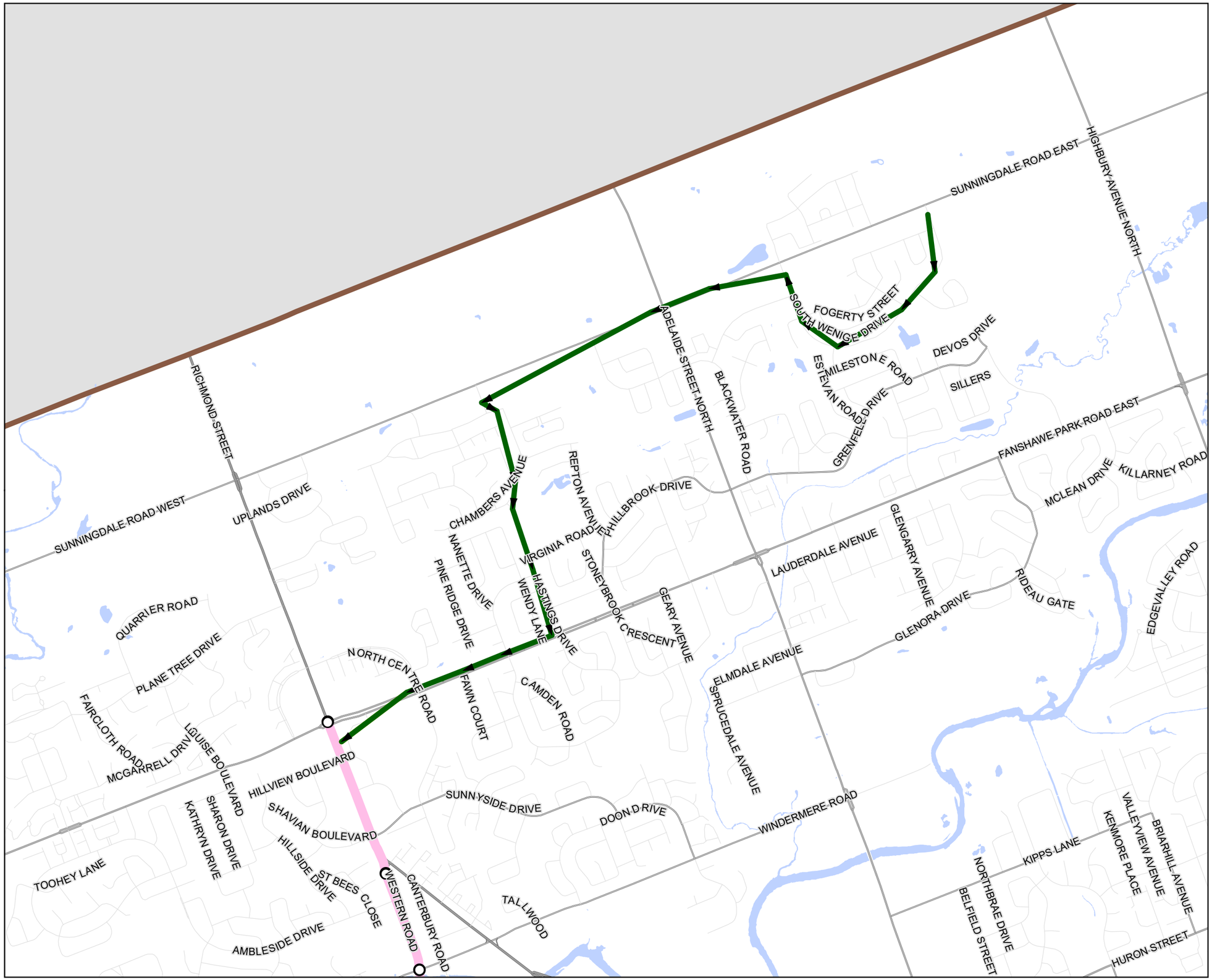
MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 188035
STATUS: FINAL
DATE: 2018-11-27



RAPID TRANSIT INTEGRATION REVIEW

2017 FALL PASSENGER PROFILE

Route: 38 Direction: I
Period: WKD PM PEAK

Passenger Profile by Route Link

- 0 - 20
- 21 - 50
- 51 - 100
- 101 - 500
- 500+
- BRT Station
- Municipal Boundary
- North-East Route
- South-West Route
- Airport Extension
- South-West Route (Mixed Traffic)
- Railway
- Waterbody

0 0.5 1 km

N W E S

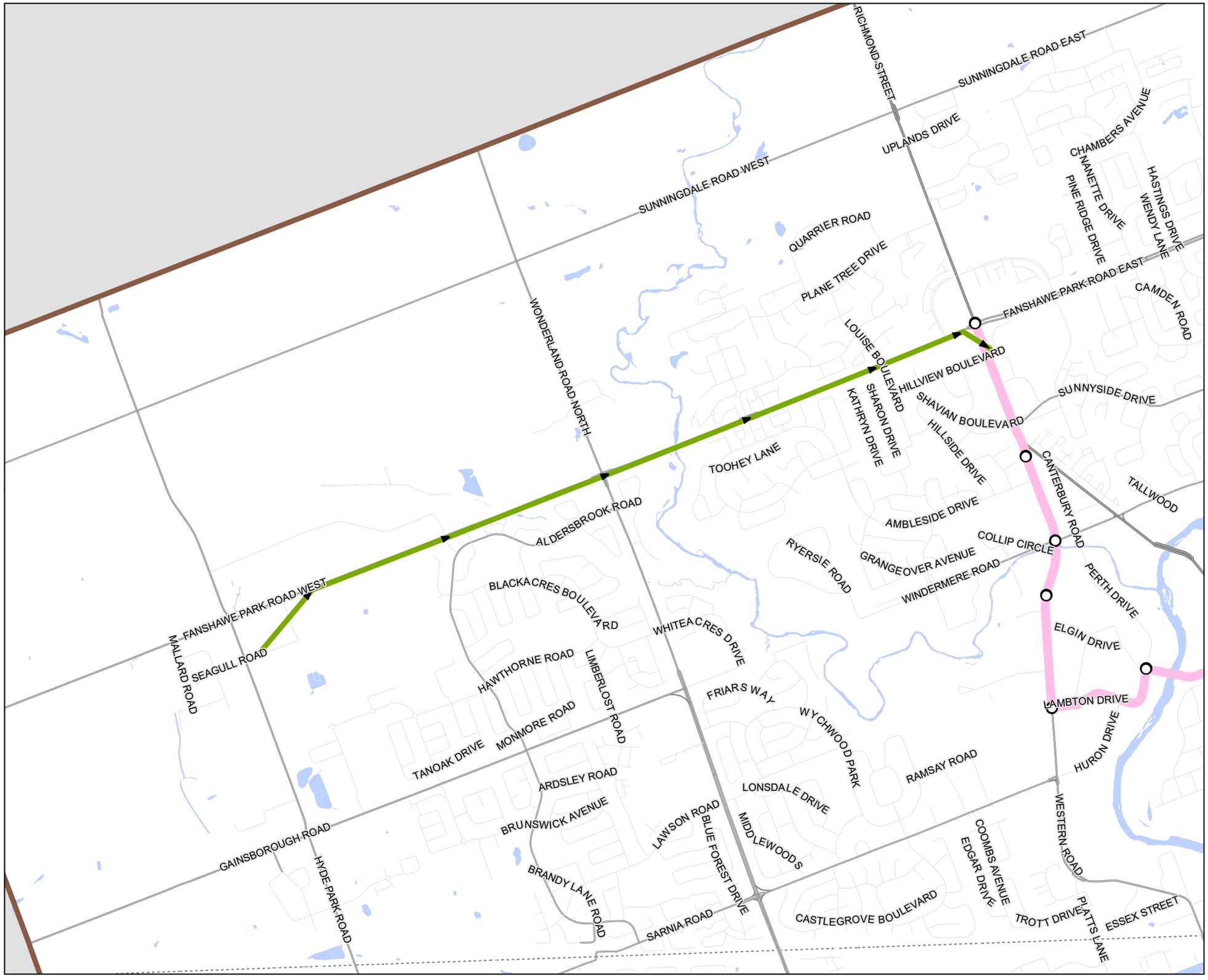
MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 188035
STATUS: FINAL
DATE: 2018-11-27



RAPID TRANSIT INTEGRATION REVIEW

2017 FALL PASSENGER PROFILE

Route: 39 Direction: I
Period: WKD PM PEAK

Passenger Profile by Route Link

- 0 - 20
- 21 - 50
- 51 - 100
- 101 - 500
- 500+
- BRT Station
- Municipal Boundary
- North-East Route
- South-West Route
- Airport Extension
- South-West Route (Mixed Traffic)
- Railway
- Waterbody

0 0.5 1 km

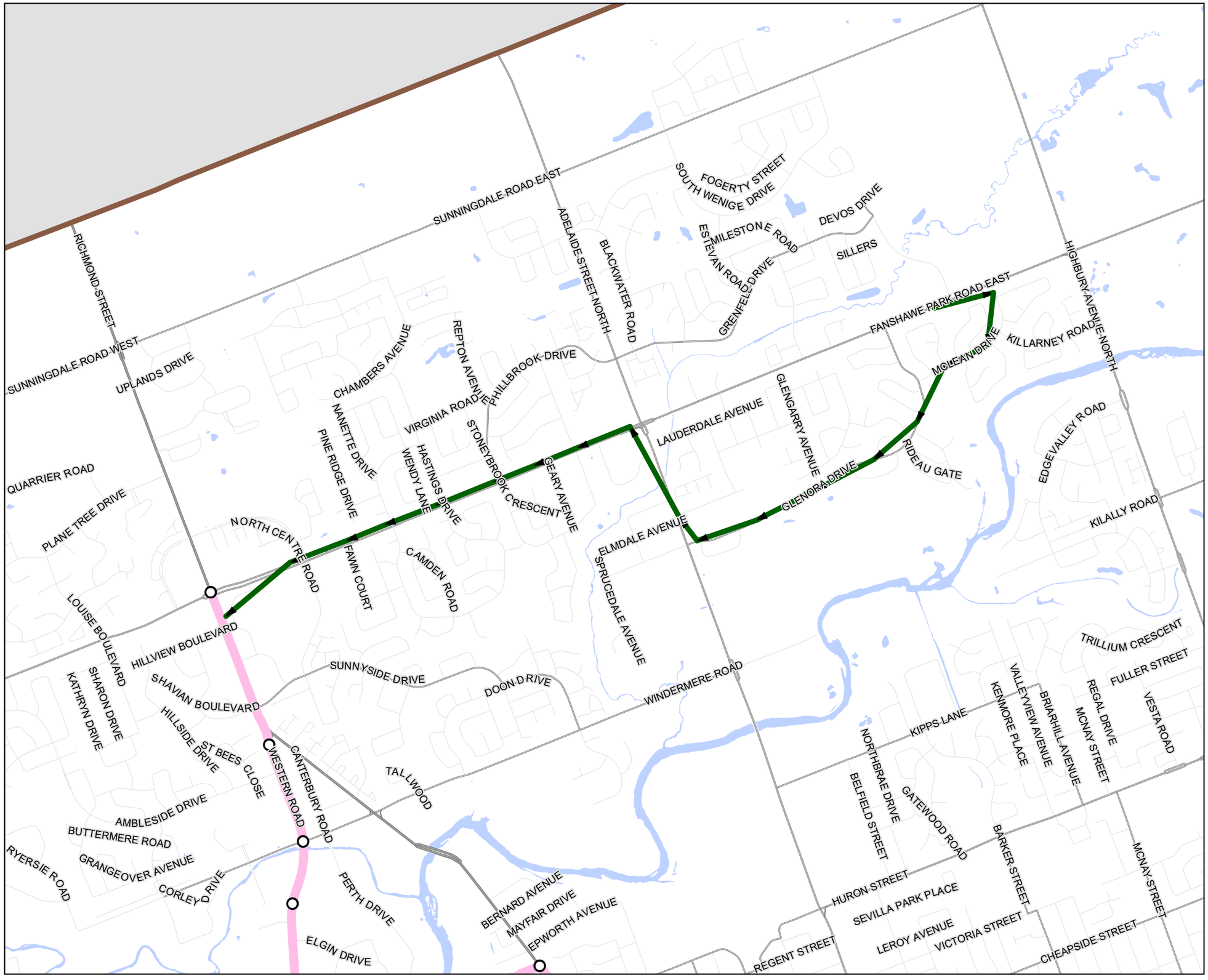
MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 188035
STATUS: FINAL
DATE: 2018-11-27



RAPID TRANSIT INTEGRATION REVIEW

2017 FALL PASSENGER PROFILE

Route: 40 Direction: I
Period: WKD PM PEAK

Passenger Profile by Route Link

- 0 - 20
- 21 - 50
- 51 - 100
- 101 - 500
- 500+
- BRT Station
- Municipal Boundary
- North-East Route
- South-West Route
- Airport Extension
- South-West Route (Mixed Traffic)
- Railway
- Waterbody

0 0.5 1 km

N W E S

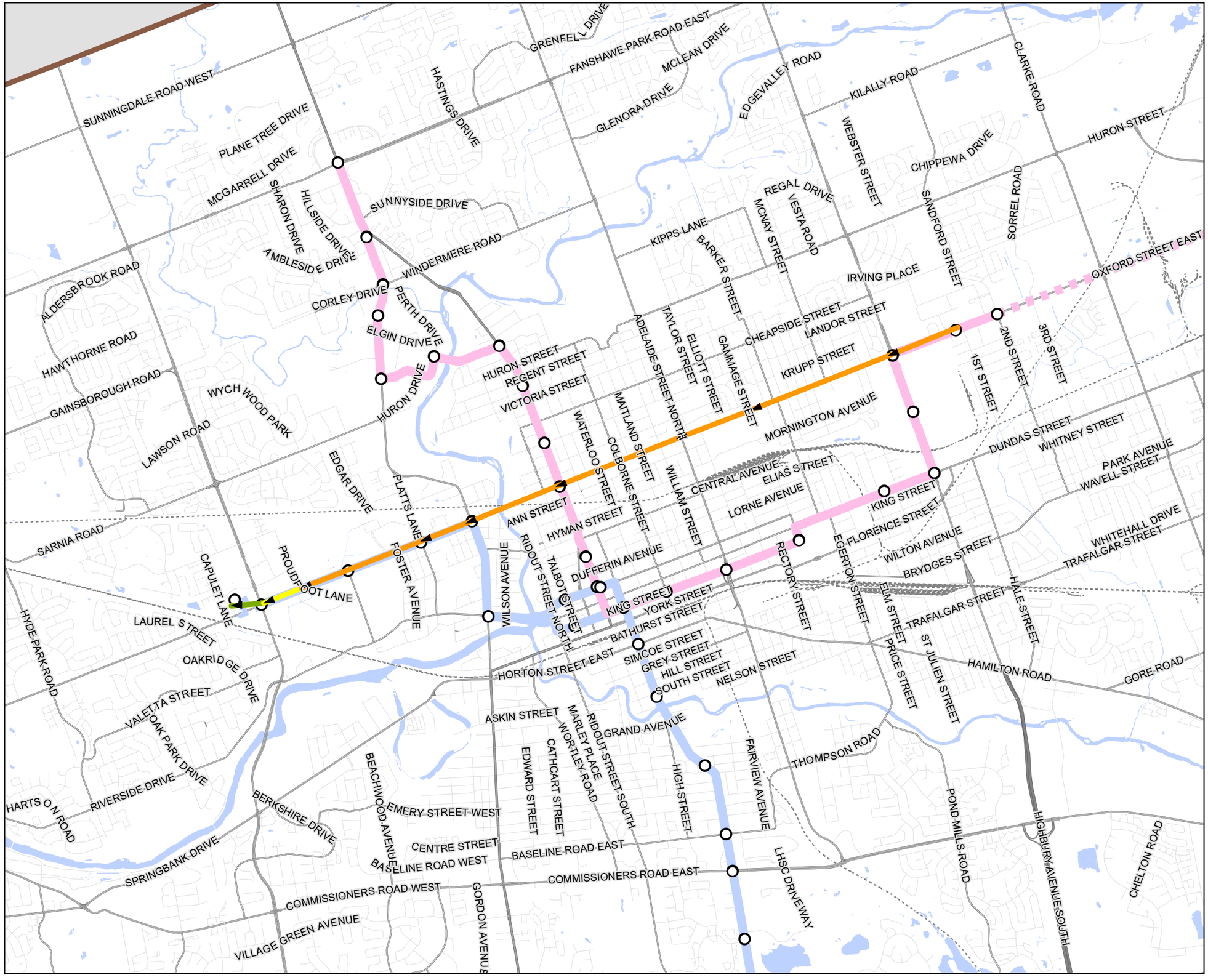
MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 188035
STATUS: FINAL
DATE: 2018-11-27



RAPID TRANSIT INTEGRATION REVIEW

2017 FALL PASSENGER PROFILE

Route: 91 Direction: I
Period: WKD PM PEAK

Passenger Profile by Route Link

- 0 - 20
- 21 - 50
- 51 - 100
- 101 - 500
- 500+
- BRT Station
- Municipal Boundary
- North-East Route
- South-West Route
- Airport Extension
- South-West Route (Mixed Traffic)
- Railway
- Waterbody

0 0.5 1 km

N W E S

MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

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FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 188035
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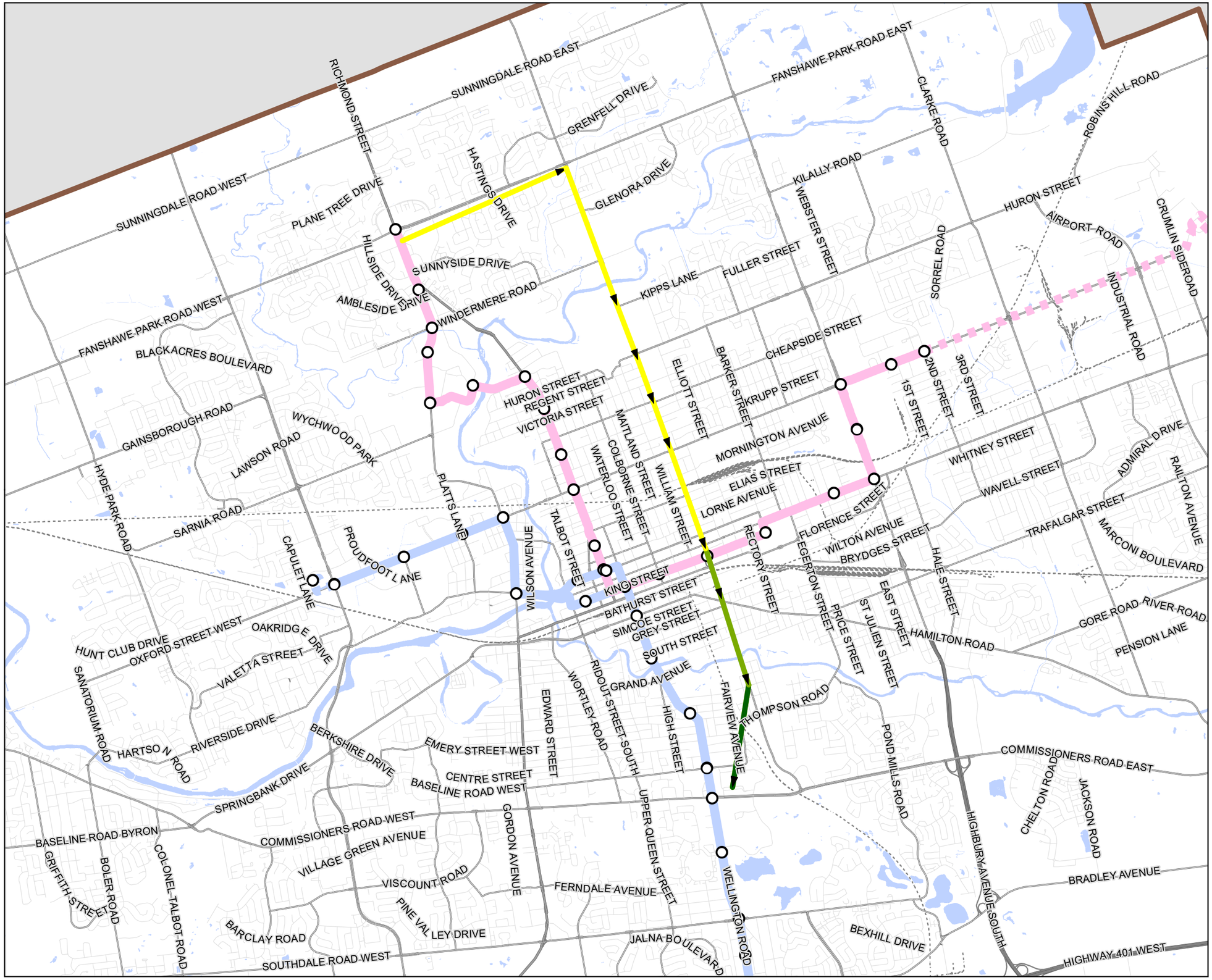
DATE: 2018-11-27



RAPID TRANSIT INTEGRATION REVIEW

2017 FALL PASSENGER PROFILE

Route: 92 Direction: I
Period: WKD PM PEAK

Passenger Profile by Route Link

- 0 - 20
- 21 - 50
- 51 - 100
- 101 - 500
- 500+
- BRT Station
- Municipal Boundary
- North-East Route
- South-West Route
- Airport Extension
- South-West Route (Mixed Traffic)
- Railway
- Waterbody

0 0.5 1 km

N W E S

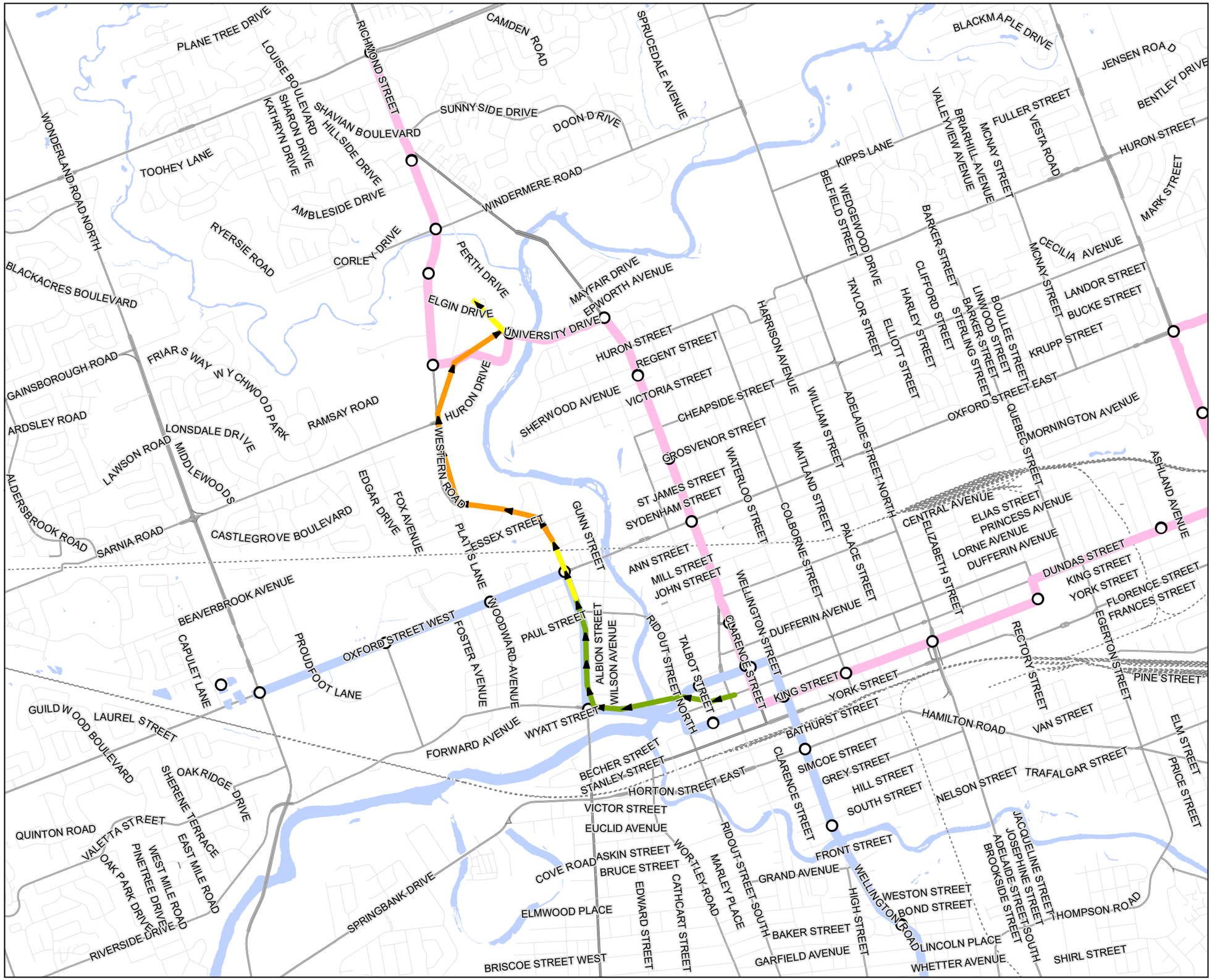
MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 188035
STATUS: FINAL
DATE: 2018-11-27



RAPID TRANSIT INTEGRATION REVIEW

2017 FALL PASSENGER PROFILE

Route: 102 Direction: I
Period: WKD PM PEAK

Passenger Profile by Route Link

- 0 - 20
- 21 - 50
- 51 - 100
- 101 - 500
- 500+
- BRT Station
- Municipal Boundary
- North-East Route
- South-West Route
- Airport Extension
- South-West Route (Mixed Traffic)
- Railway
- Waterbody

0 0.5 1 km

N W E S

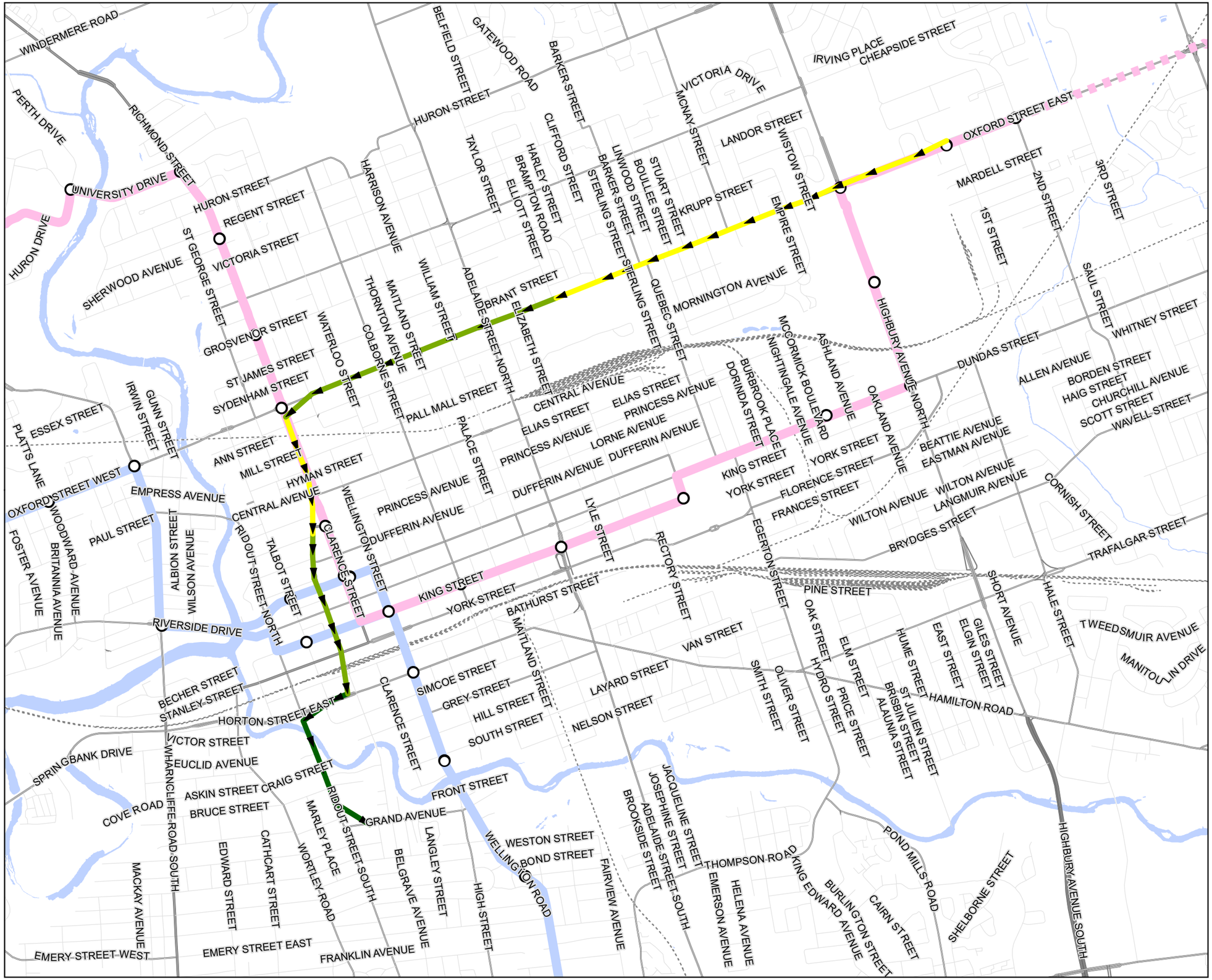
MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 188035
STATUS: FINAL
DATE: 2018-11-27



RAPID TRANSIT INTEGRATION REVIEW

2017 FALL PASSENGER PROFILE

Route: 104 Direction: I
Period: WKD PM PEAK

Passenger Profile by Route Link

- 0 - 20
- 21 - 50
- 51 - 100
- 101 - 500
- 500+
- BRT Station
- Municipal Boundary
- North-East Route
- South-West Route
- Airport Extension
- South-West Route (Mixed Traffic)
- Railway
- Waterbody

0 0.5 1 km

N W E S

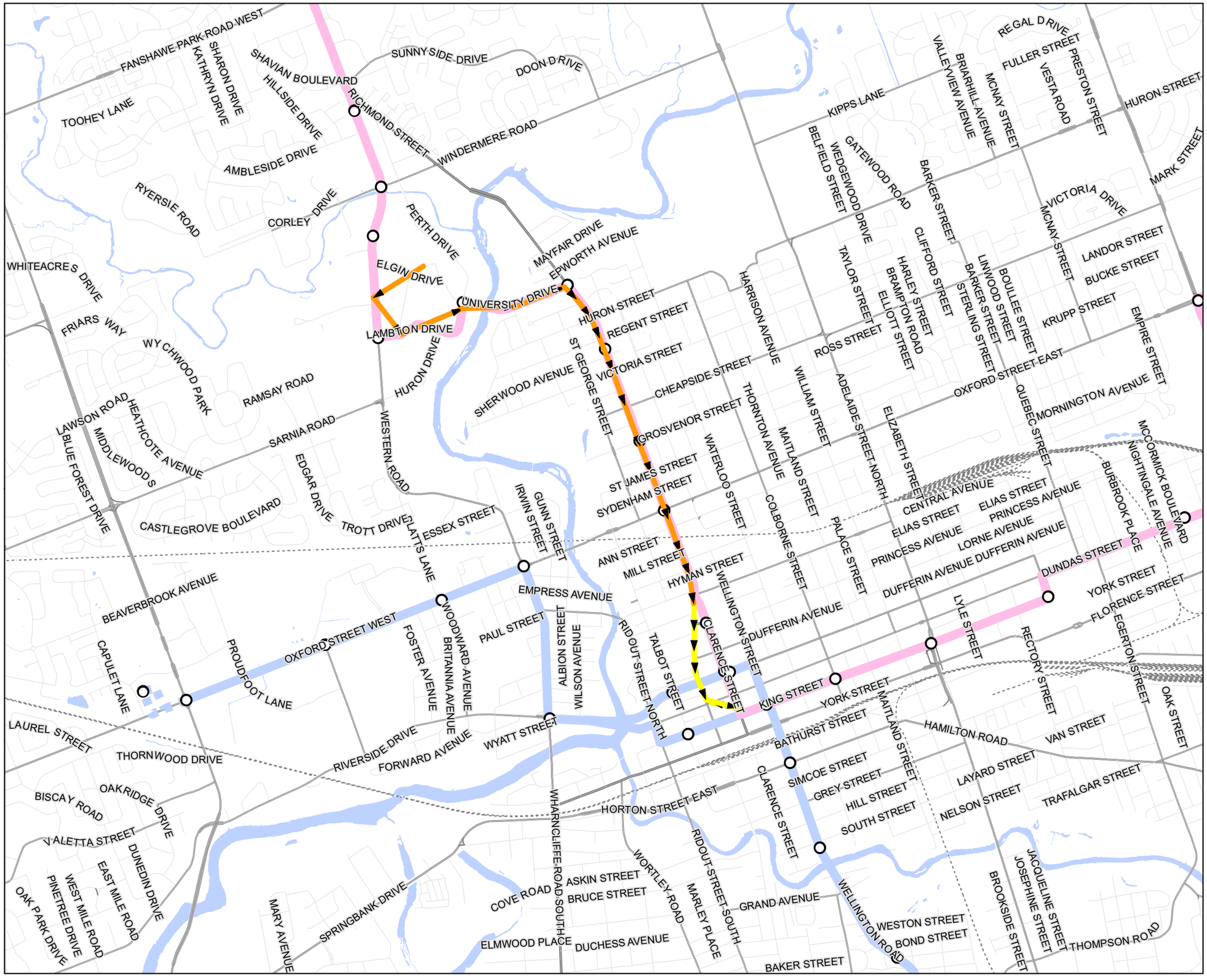
MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 188035
STATUS: FINAL
DATE: 2018-11-27



RAPID TRANSIT INTEGRATION REVIEW

2017 FALL PASSENGER PROFILE

Route: 106 Direction: I
Period: WKD PM PEAK

Passenger Profile by Route Link

- 0 - 20
- 21 - 50
- 51 - 100
- 101 - 500
- 500+
- BRT Station
- Municipal Boundary
- North-East Route
- South-West Route
- Airport Extension
- South-West Route (Mixed Traffic)
- Railway
- Waterbody

0 0.5 1 km

N W E S

MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

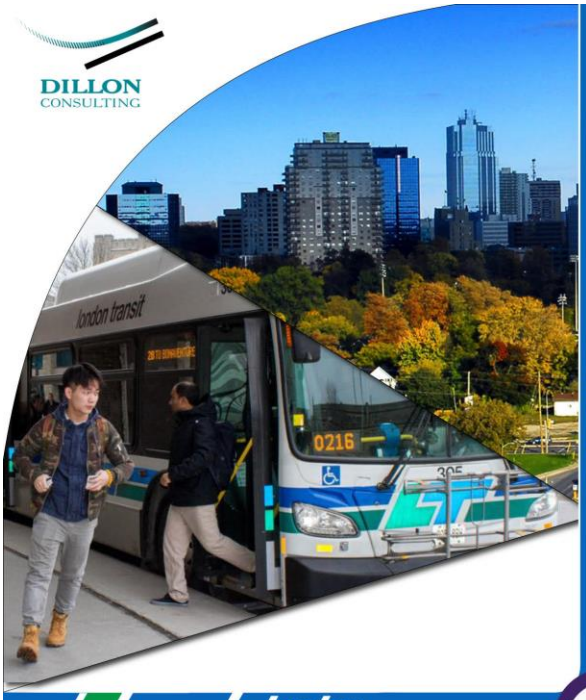
FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 188035
STATUS: FINAL
DATE: 2018-11-27

APPENDIX B

Public Open House #1 Boards



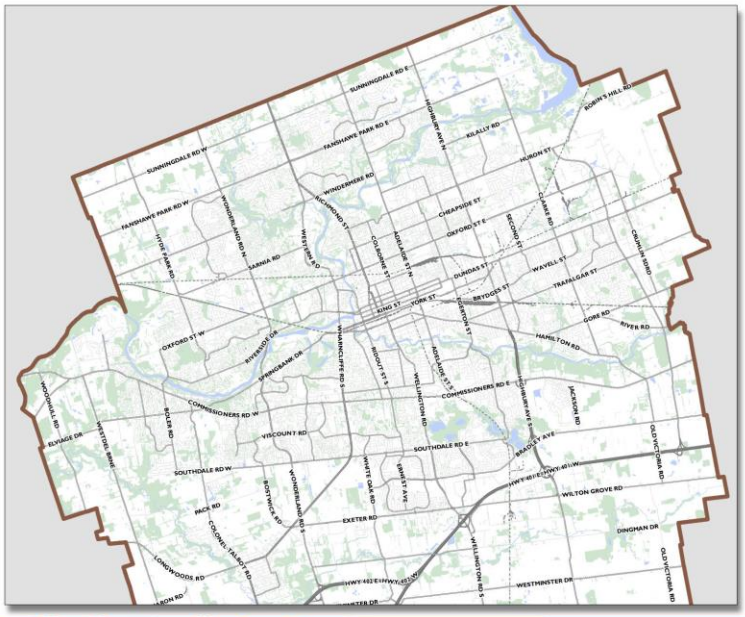
RAPID TRANSIT INTEGRATION STRATEGY
FIVE-YEAR SERVICE PLAN

Public Open House

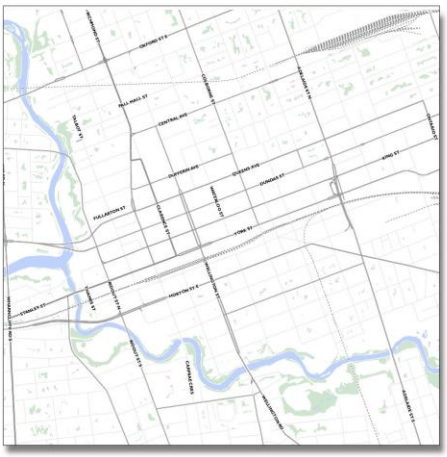
Study Objectives

- Identify what works well and address the quality and performance of existing bus routes and services
- Understand travel patterns of Londoners and what motivates their travel choices
- Recommend options that will attract more customers to transit
- Develop a 2020 to 2024 service plan that responds to changes in the City and improves the customer experience
- Identify changes to the bus network that need to take place with the introduction of Bus Rapid Transit

Where should we go?



Instructions:
Draw a line between your home and your most frequent destination in London



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Five-Year Service Plan

Would you rather have...

Direct Travel
Direct and frequent routes along major collector and arterial streets with few deviations. (longer walks to bus stops to access direct and frequent bus service are acceptable)

OR

Shorter Walking Distance
Service closer to my home and/or final destination. (short walks to bus stops – less than 5 minutes – are needed even if it results in less direct (longer travel time) or infrequent service in some parts of the city)

Peak Period Service
More frequent weekday peak service (6:00am – 9:00am and 4:00pm – 6:00pm) that addresses overcrowding issues.

OR

Off-Peak Period Service
More frequent off-peak (midday, evening and weekend) service that reduces my waiting time.

Instructions: Place a sticker on the option you prefer for each question

Local Bus Route Connect to BRT
A local fixed route on an LTC bus to connect with BRT

OR

On-Demand Connection to BRT
An on-demand option which uses a phone or smartphone application (e.g. calling in, ridehailing technology) during off peak periods or in areas with low-demand to connect with BRT

Current Fares
Passenger fares to remain low. (which may result in the existing level of service remaining the same)

OR

Service Improvements
Service improvements, such as more frequent service or extended hours of service. (which may require periodic increases to passenger fares)

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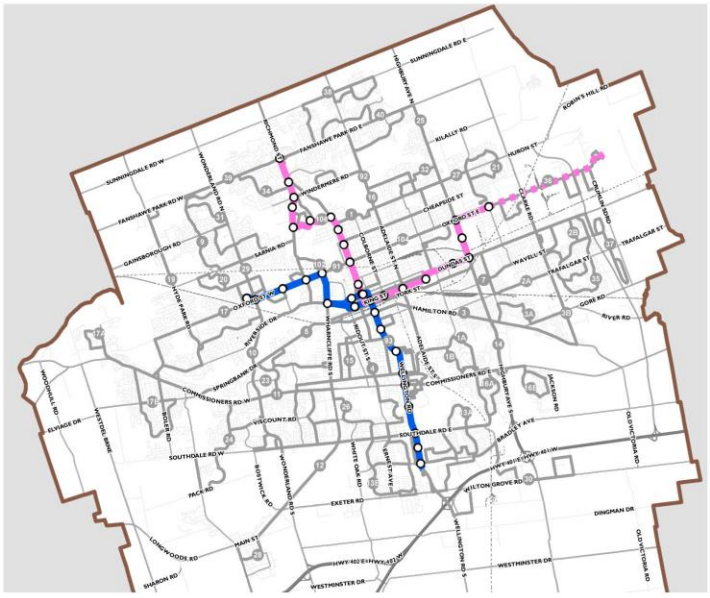
Five-Year Service Plan

TRANSIT MANAGER FOR A DAY

Instructions:
On a sticky note, write down your thoughts and place them on a board

Rapid Transit Integration Design Principles



- Future "L" Line BRT
- Future "7" Line BRT
- Existing Transit Routes

The introduction of Bus Rapid Transit will require a number of bus routes to change to improve connections to Bus Rapid Transit, reduce duplication of service between Bus Rapid Transit routes and local bus services.

The following six design principles are proposed to be used to guide any modifications to local bus service once Bus Rapid Transit is in place.

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Five-Year Service Plan

THE SIX SERVICE DESIGN PRINCIPLES

Objective

#1: MAINTAIN CONNECTIONS

Ensure routes connect directly to key origins and destinations - between places where people live and where people can work, shop, learn, socialize and do business.

Policy

"When re-designing local service to connect with bus rapid transit, direct connections to key destinations on the existing route should be maintained"

#2: PROVIDE FREQUENT SERVICE

Local routes that connect to Bus Rapid Transit should be designed to minimize waiting times when customers transfer between services. This will involve reducing the frequency of connecting local bus services where applicable*.

**This principle will may not be met on lower ridership routes that do not meet minimum productivity standards.*

"The frequency of local bus routes should not be more than double the frequency of a connecting Bus Rapid Transit route during weekday peak and midday periods. (e.g. local route should operate every 20 minutes or less if the Bus Rapid Transit routes operates every 10 minutes)."

#3: ENSURE DIRECTNESS

Local bus routes and connections to Bus Rapid Transit should be designed to maintain direct travel and reduce travel time to major destinations (e.g. downtown London).

"Route changes that connect customers to Bus Rapid Transit should be avoided it it results in a longer travel time to major destinations (greater than 10%)."

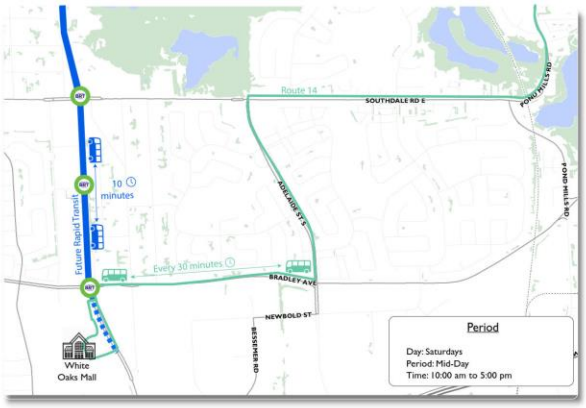
RAPID TRANSIT INTEGRATION PRINCIPLES

Application of Design Principles:

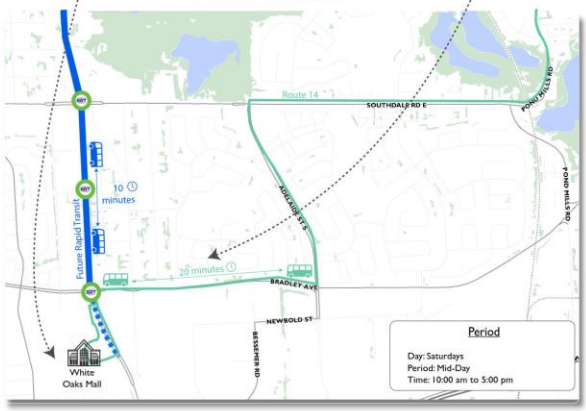
#2: PROVIDE FREQUENT SERVICE

#3: ENSURE DIRECTNESS

Existing Network



Future Network



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Rapid Transit Integration Strategy
Five-Year Service Plan

RAPID TRANSIT INTEGRATION PRINCIPLES

Objective

Policy

#4: MINIMIZE DUPLICATION

Bus Rapid Transit will provide high frequency and faster service along key corridors in London. To make the best use of this investment, duplication with local services should be minimized and reinvested to other areas of the City. Some duplication will be permitted where Bus Rapid Transit routes do not service local stops along the corridor, which would otherwise result in longer walking distance for customers.

"Local bus service should be designed to minimize duplication with Bus Rapid Transit routes. Limited local bus service will be permitted to provide access to local stops that are not serviced by Bus Rapid Transit vehicles."

#5: CONSERVE EFFECTIVE OPERATIONS

Any changes to local bus routes to connect to the Bus Rapid Transit Network must be considered at a 'system-wide' level, ensuring all routes work together from an operations and customer perspective. This includes maintaining on-time performance (the ability to perform according to a scheduled time), connectivity to other routes and maintaining legible frequencies

"Service modifications should consider how all routes work together and maintain effective operation of the system."

#6: EXPLORE ALTERNATIVE SERVICE MODELS IN LOW DEMAND AREAS

Provide effective connections between Bus Rapid Transit and low-demand areas through the use of Alternative Service Delivery (ASD) models. ASD models are demand-responsive services which use smaller vehicles that do not rely on a fixed route or schedule. Customers can book a shared-ride by calling London Transit or using a mobile app.

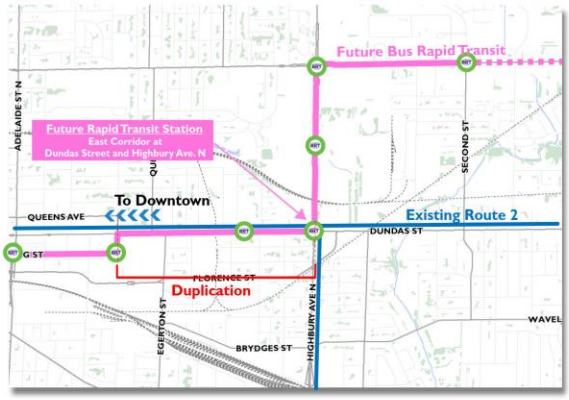
"Explore alternative service delivery models in areas with low ridership demand to provide cost-effective and attractive connections to the network, including Bus Rapid Transit"

RAPID TRANSIT INTEGRATION PRINCIPLES

Application of Design Principle:

#4: MINIMIZE DUPLICATION

Existing Network



Future Network

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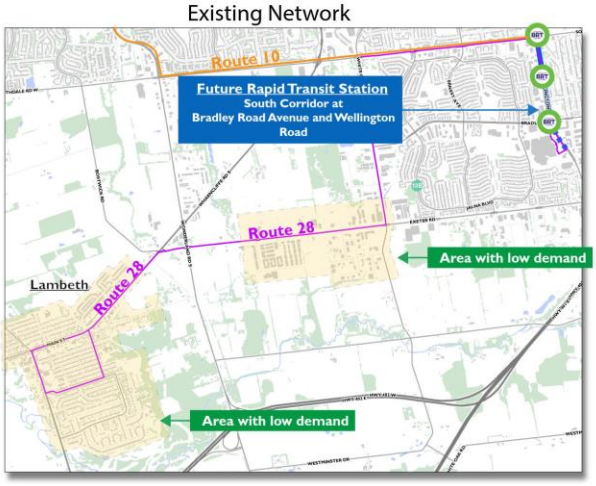
Rapid Transit Integration Strategy
Five-Year Service Plan

RAPID TRANSIT INTEGRATION PRINCIPLES

Application of Design Principles:

#6: EXPLORE ALTERNATIVE SERVICE MODELS IN LOW DEMAND AREAS

Existing Network



Future Network

DESIGN PRINCIPLES FEEDBACK

Please place a **one (1) sticker** in the right column to signify which rapid transit integration principle that is most important to you.

#1: MAINTAIN CONNECTIONS	Ensure routes connect directly to key origins and destinations - between places where people live and where people can work, shop, learn, socialize and do business.	
#2: PROVIDE FREQUENT SERVICE	Local routes that connect to Bus Rapid Transit should be designed to minimize waiting times when customers transfer between services. This will involve reducing the frequency of connecting local bus services where applicable	
#3: ENSURE DIRECTNESS	Local bus routes and connections to Bus Rapid Transit should be designed to maintain direct travel and reduce travel time to major destinations (e.g. downtown London).	
#4: MINIMIZE DUPLICATION	Bus Rapid Transit will provide high frequency and faster service along key corridors in London. To make the best use of this investment, duplication with local services should be minimized and reinvested to other areas of the City.	
#5: CONSERVE EFFECTIVE OPERATIONS	Any changes to local bus routes to connect to the Bus Rapid Transit Network must be considered at a 'system-wide' level, ensuring all routes work together from an operations and customer perspective.	
#6: EXPLORE ALTERNATIVE SERVICE MODELS IN LOW DEMAND AREAS	Provide effective connections between Bus Rapid Transit and low-demand areas through the use of Alternative Service Delivery (ASD) models. ASD models are demand-responsive services which use smaller vehicles that do not rely on a fixed route or schedule. Customers can book a shared-ride by calling London Transit or using a mobile app.	

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Rapid Transit Integration Strategy
Five-Year Service Plan

NEXT STEPS

1. Adjust Rapid Transit Integration Design Principles based on comments received
2. Identify long-term route modifications with Bus Rapid Transit in place based on approved design principles
3. Assess existing routes and services
4. Identify service improvements for the period between 2020 and 2024.
5. Review service options with the public in the early 2019 and seek feedback
6. Recommend service plan
7. Present to Commission in March 2019

Thank-you for your Feedback!

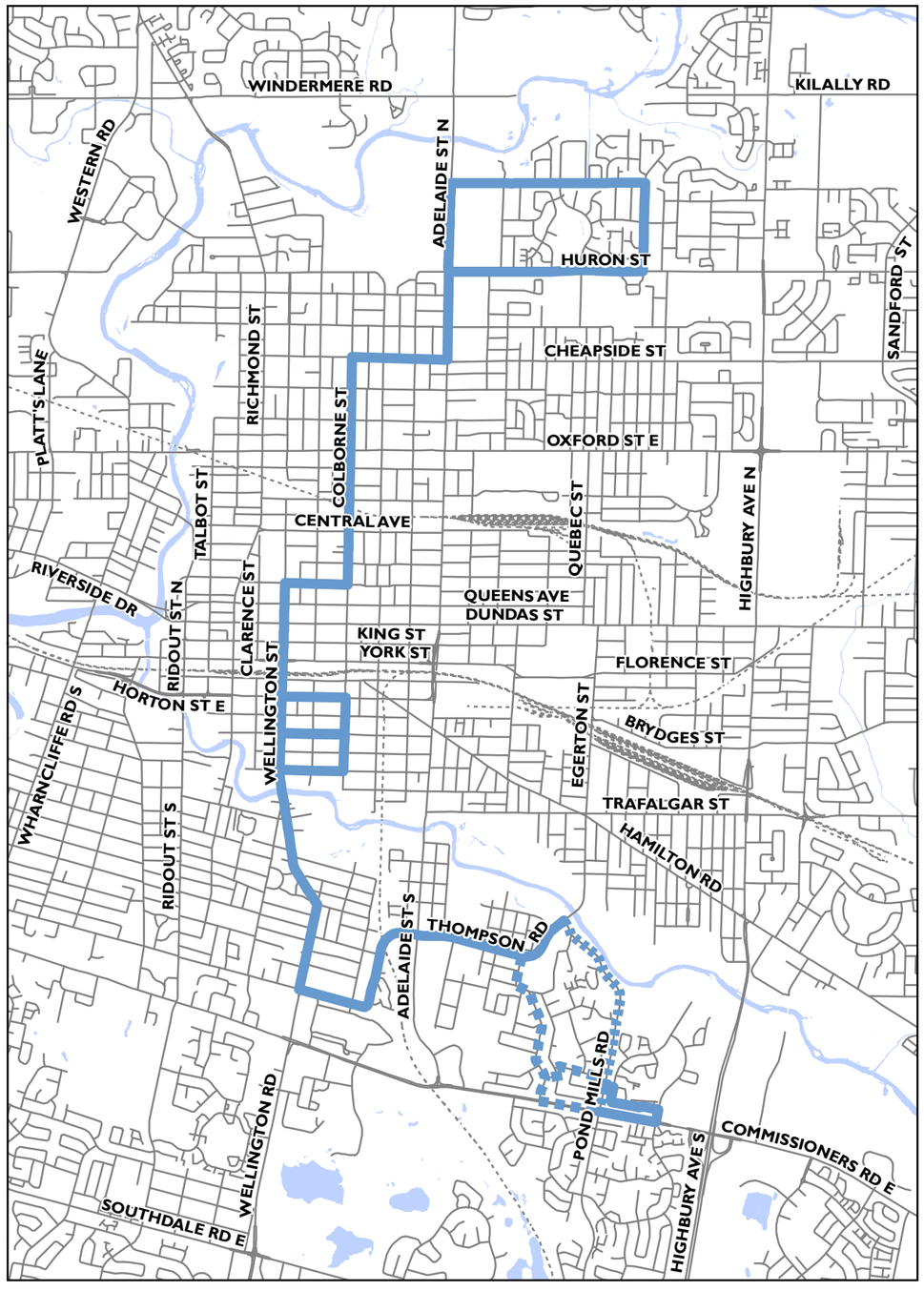
We appreciate all of your comments and input. We encourage you to send further comments or questions regarding this study by emailing iboruck@dillon.ca.

You can provide more feedback by filling out our Online Transit Survey at www.ltconline.ca/LetsTalkTransit or a comment sheet at this meeting

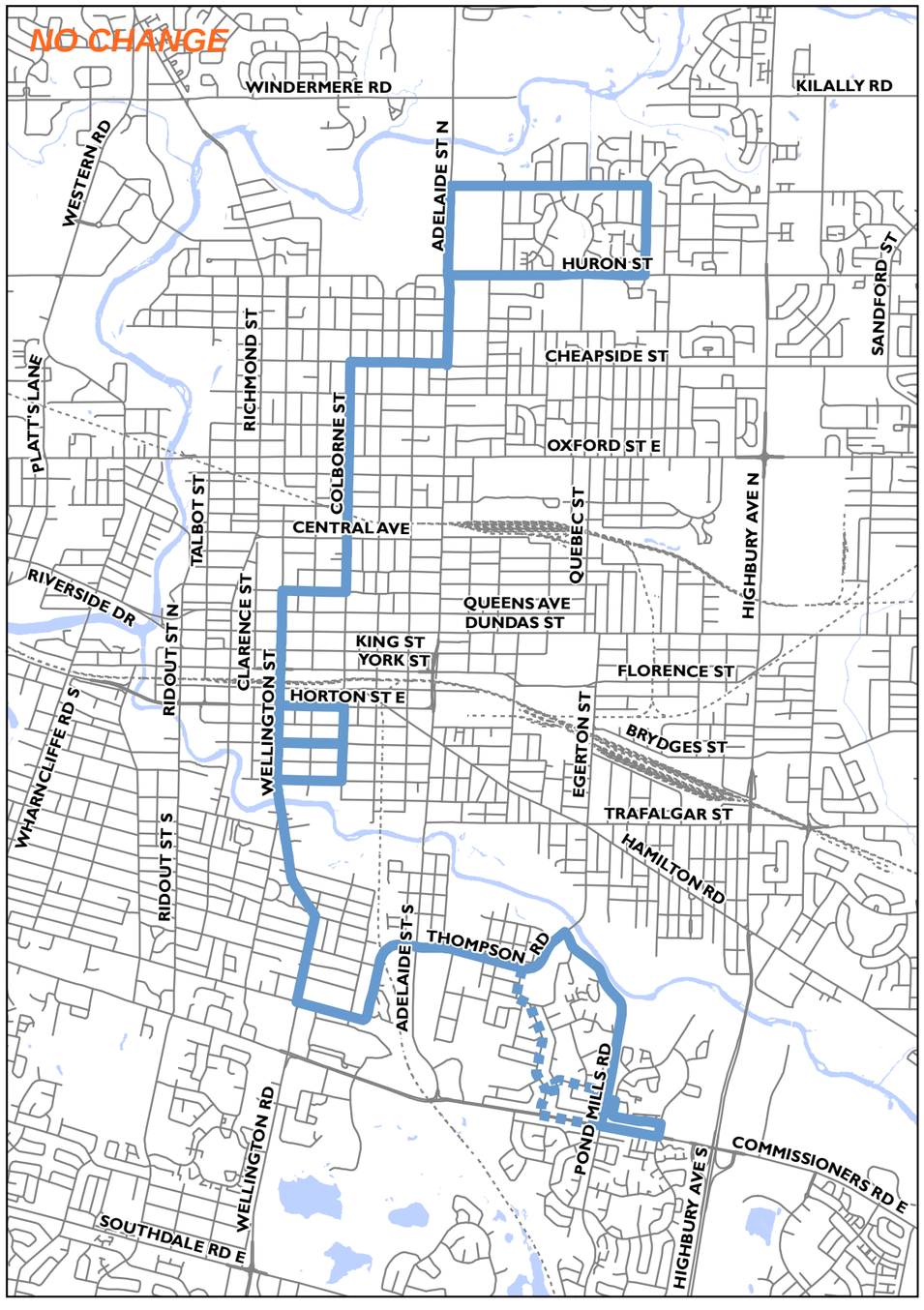
APPENDIX C

Proposed Route Modifications

PLANNED 2019 NETWORK



PROPOSED 2024 NETWORK



LONDON TRANSIT COMMISSION

5-YEAR SERVICE PLAN

LONDON TRANSIT NETWORK
ROUTE NUMBER: 1

- Municipal Boundary
- Railway
- Waterbody

Route
- 1
- 1B

0 0.5 1 km

MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

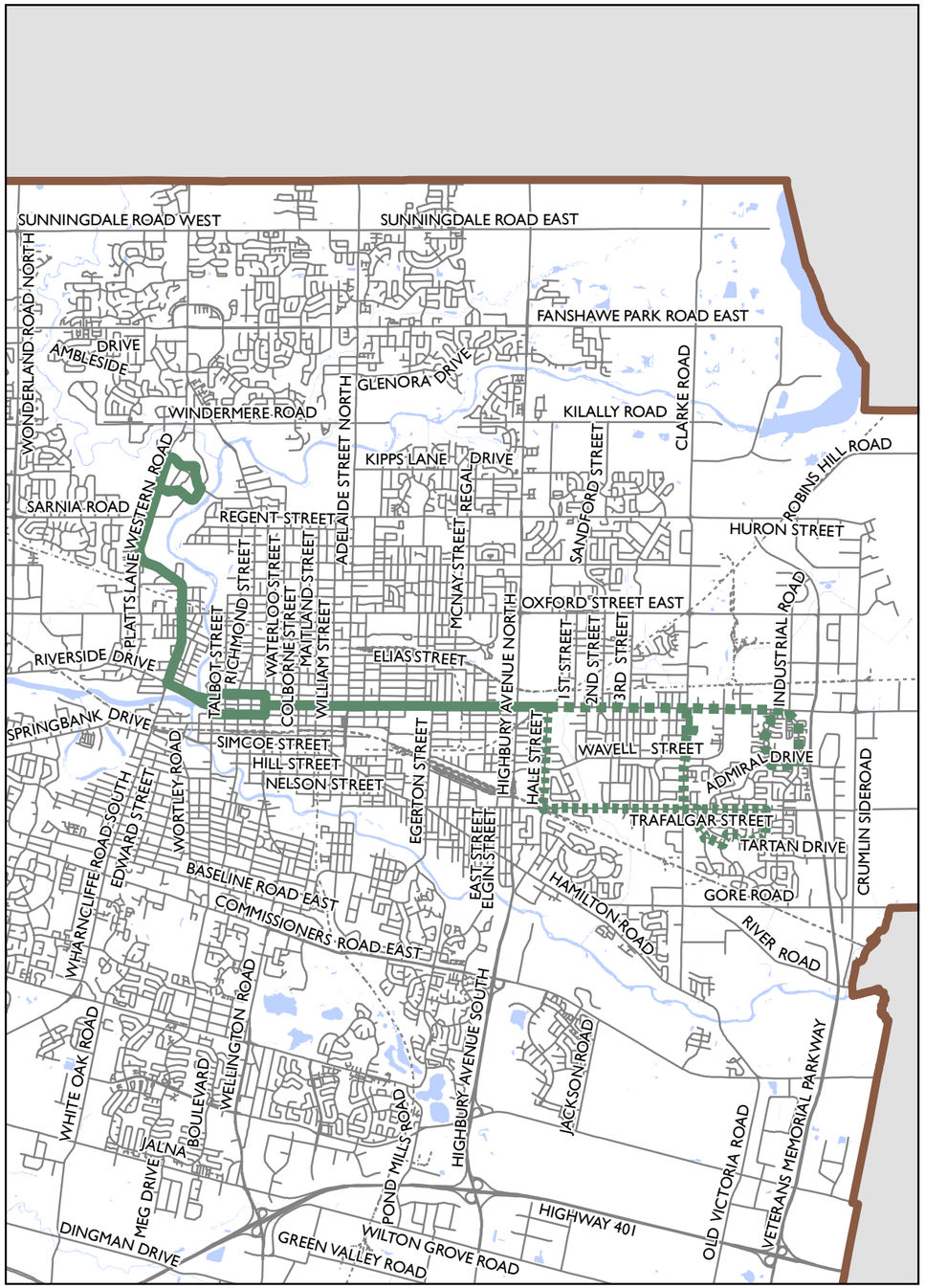
FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 188035
STATUS: FINAL
DATE: 2019-02-20

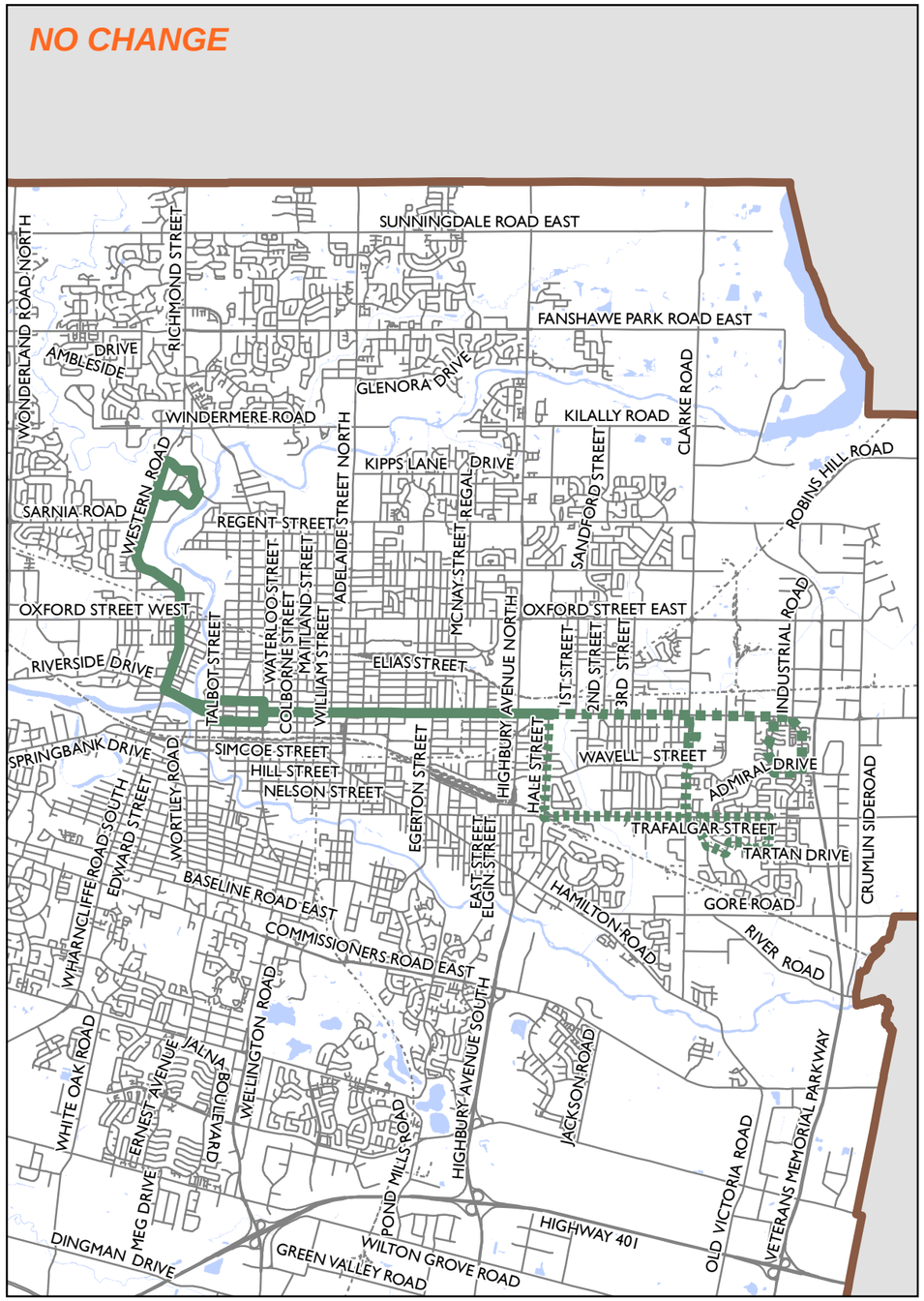
	WEEKDAY						SATURDAY					SUNDAY		
	EARLY AM	AM PEAK	BASE	PM PEAK	EARLY EVE	LATE EVE	EARLY AM	BASE	PEAK	EARLY EVE	LATE EVE	EARLY AM	DAY	EVENING
EXISTING 2019	20	15	20	16	25	30	40	30	20	30	30	32	25	30
PROPOSED 2024	20	15	20	16	25	30	40	30	20	30	30	32	25	30

PLANNED 2019 NETWORK



PROPOSED 2024 NETWORK

NO CHANGE



LONDON TRANSIT COMMISSION

5-YEAR SERVICE PLAN

LONDON TRANSIT NETWORK
ROUTE NUMBER: 2

- Municipal Boundary
- Railway
- Waterbody

Route
- 2
- 2A
- 2B

0 0.5 1 km

MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

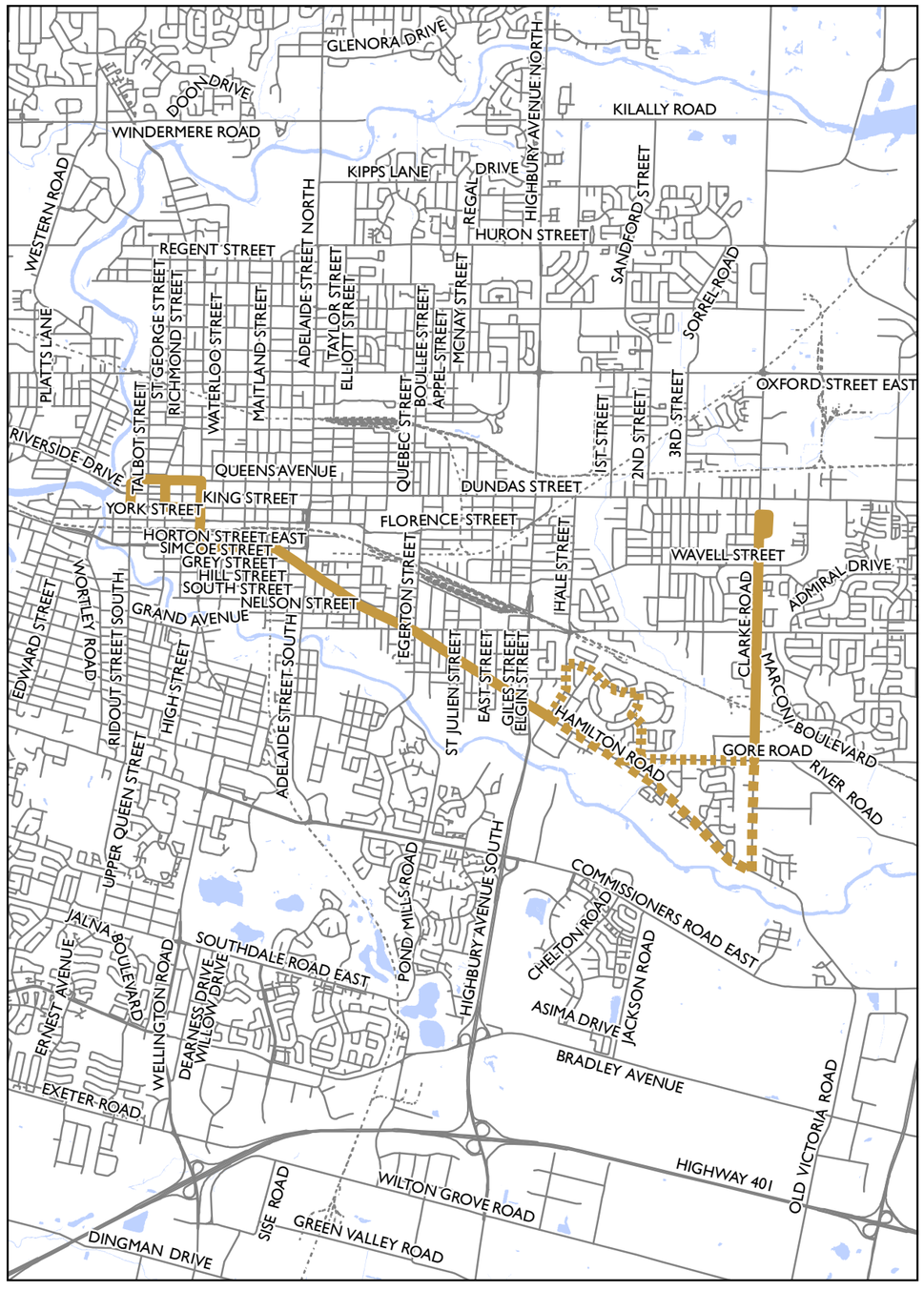
FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

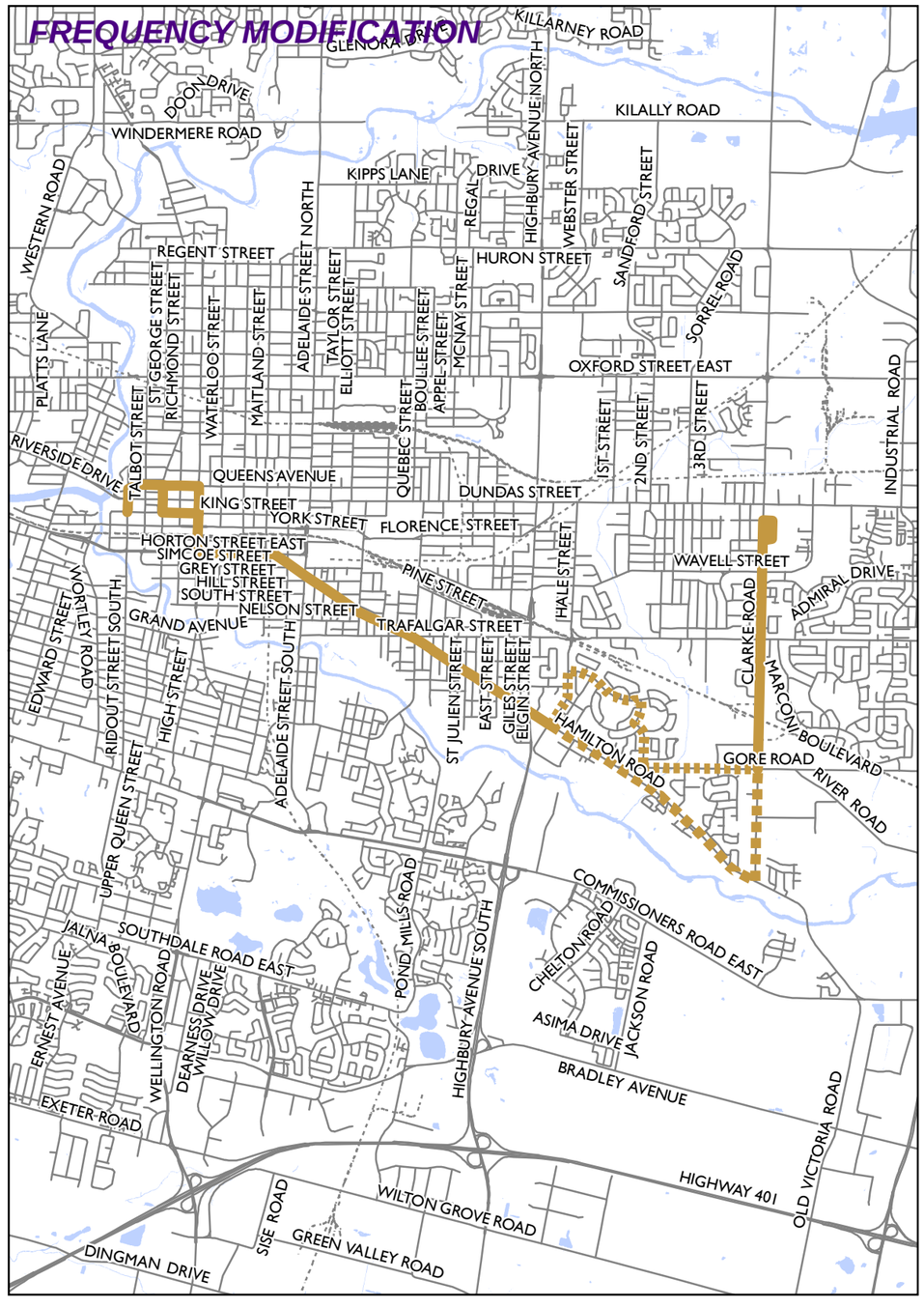
PROJECT: 188035
STATUS: FINAL
DATE: 2019-02-20

	WEEKDAY						SATURDAY					SUNDAY		
	EARLY AM	AM PEAK	BASE	PM PEAK	EARLY EVE	LATE EVE	EARLY AM	BASE	PEAK	EARLY EVE	LATE EVE	EARLY AM	DAY	EVENING
EXISTING 2019	15	15	15	15	15	20	30	15	15	15	30	30	15	30
PROPOSED 2024	15	15	15	15	15	20	30	15	15	15	30	30	15	30

EXISTING 2019 NETWORK



PROPOSED 2024 NETWORK



LONDON TRANSIT COMMISSION

5-YEAR SERVICE PLAN

LONDON TRANSIT NETWORK
ROUTE NUMBER: 3

- Municipal Boundary
- Railway
- Waterbody

Route
- 3
- 3A
- 3B

0 0.5 1 km

MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

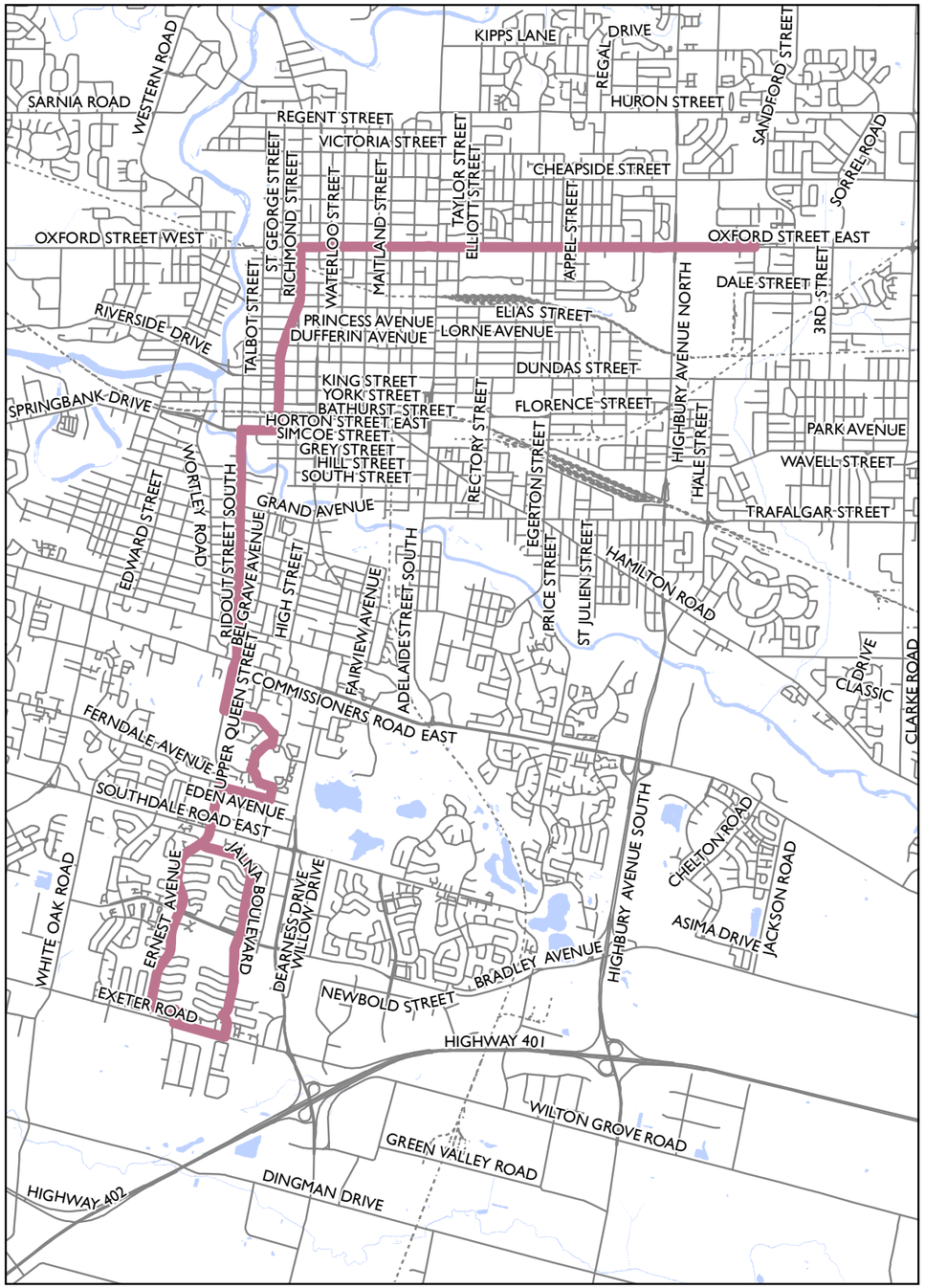
FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

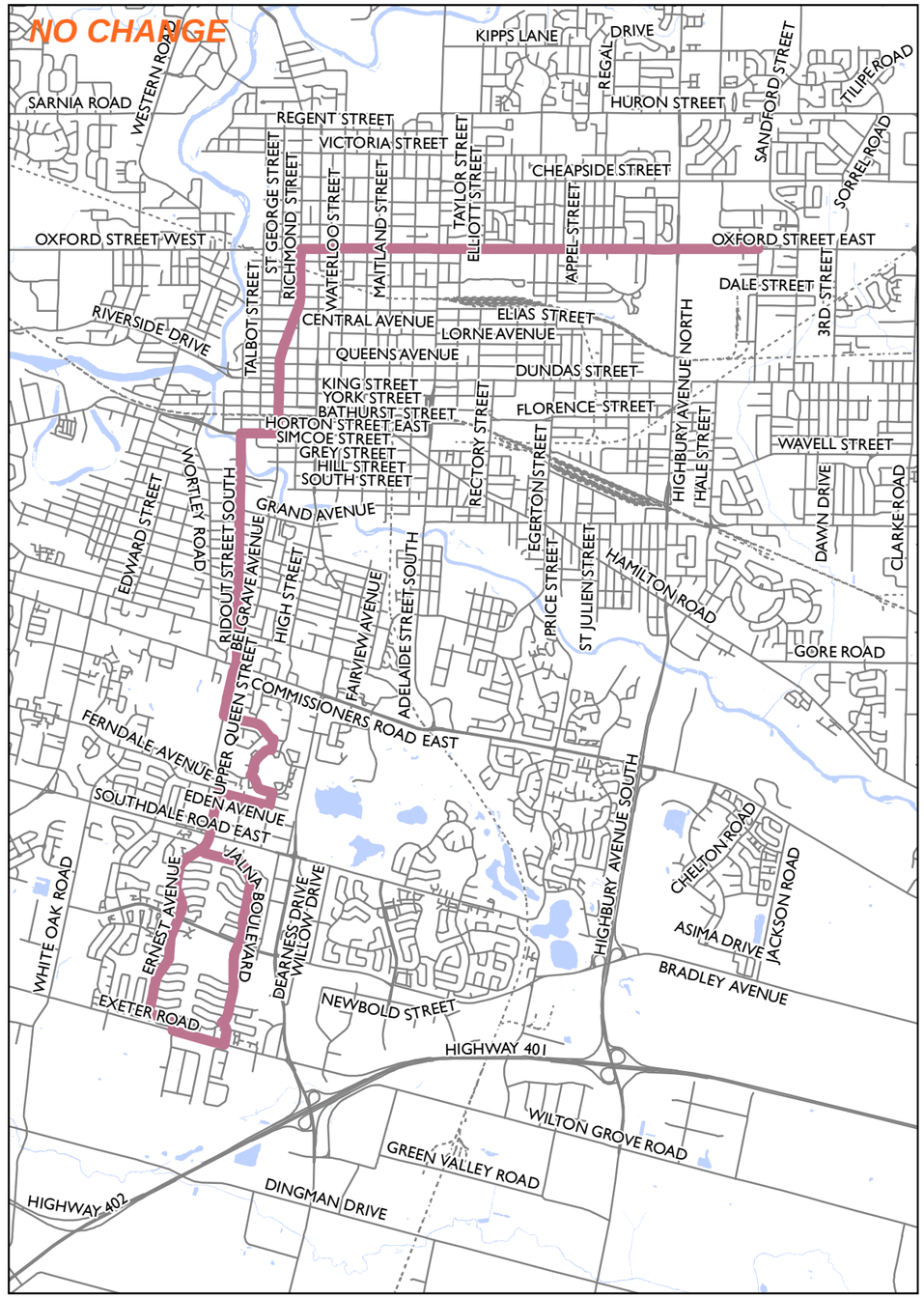
PROJECT: 188035
STATUS: FINAL
DATE: 2019-02-20

	WEEKDAY						SATURDAY					SUNDAY		
	EARLY AM	AM PEAK	BASE	PM PEAK	EARLY EVE	LATE EVE	EARLY AM	BASE	PEAK	EARLY EVE	LATE EVE	EARLY AM	DAY	EVENING
EXISTING 2019	25	15	15	15	30	30	30	30	17	30	30	30	30	30
PROPOSED 2024	30	10	15	10	30	30	30	30	15	30	30	30	30	30

PLANNED 2019 NETWORK



PROPOSED 2024 NETWORK



LONDON TRANSIT COMMISSION

5-YEAR SERVICE PLAN

LONDON TRANSIT NETWORK
ROUTE NUMBER: 4

- Municipal Boundary
- Railway
- Waterbody

Route
4

0 0.5 1 km

MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

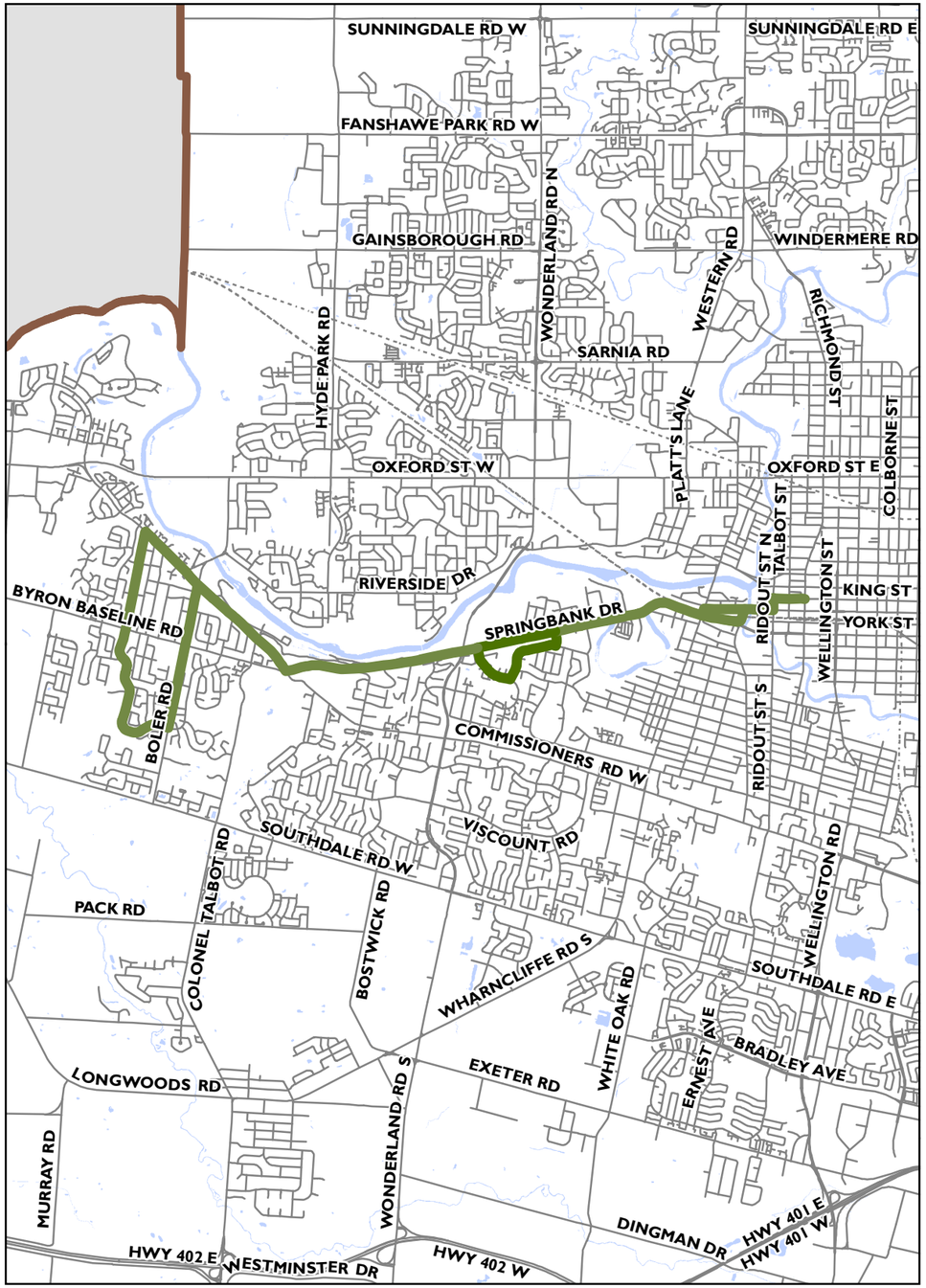
FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 188035
STATUS: FINAL
DATE: 2019-02-20

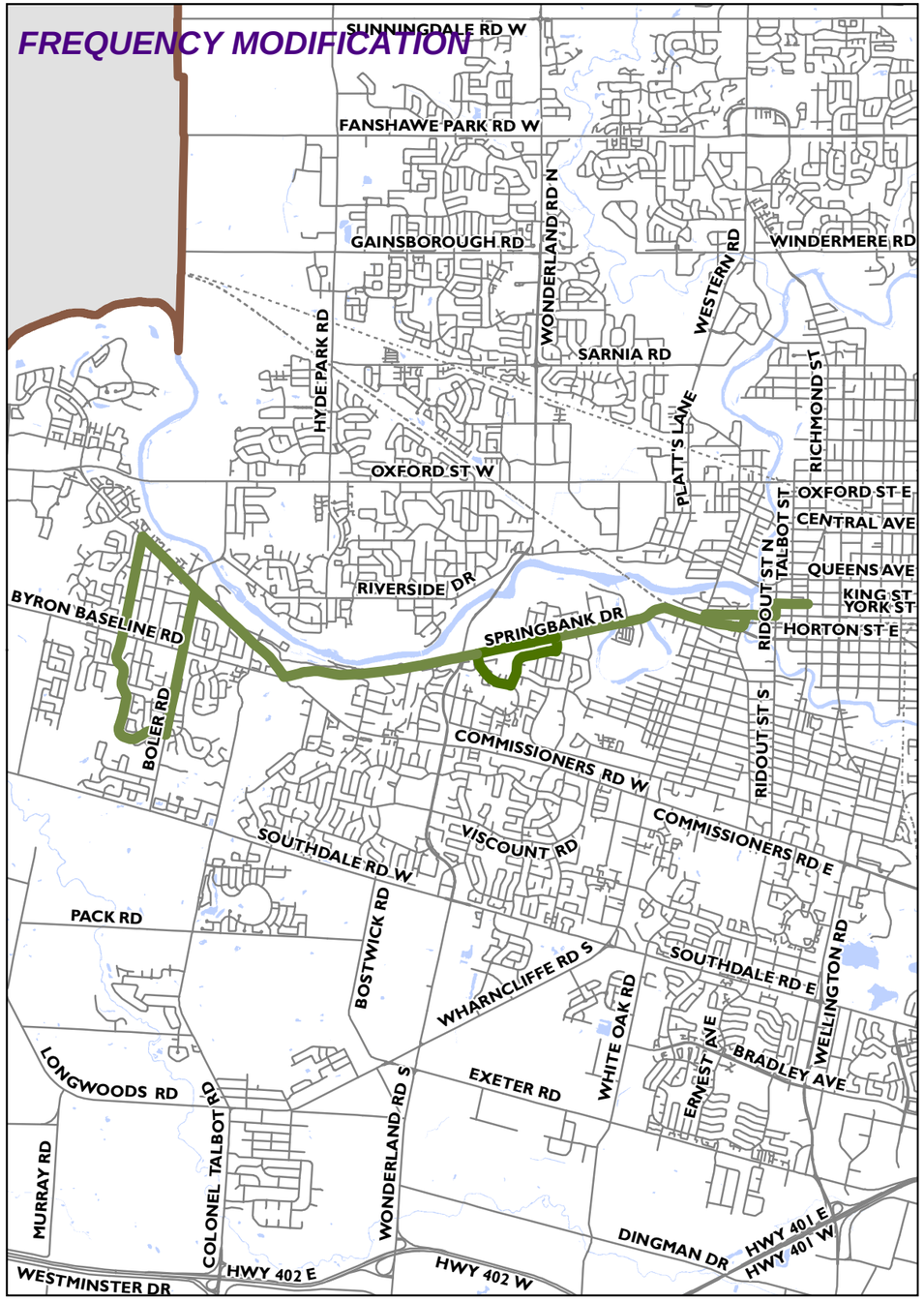
	WEEKDAY						SATURDAY					SUNDAY		
	EARLY AM	AM PEAK	BASE	PM PEAK	EARLY EVE	LATE EVE	EARLY AM	BASE	PEAK	EARLY EVE	LATE EVE	EARLY AM	DAY	EVENING
EXISTING 2019	40	15	20	15	20	30	30	30	25	30	30	30	30	30
PROPOSED 2024	40	15	20	15	20	30	30	30	25	30	30	30	30	30

PLANNED 2019 NETWORK



PROPOSED 2024 NETWORK

FREQUENCY MODIFICATION



LONDON TRANSIT COMMISSION

5-YEAR SERVICE PLAN

LONDON TRANSIT NETWORK
ROUTE NUMBER: 5

- Municipal Boundary
- Railway
- Waterbody

Route

- 5B
- 5A
- 5

0 0.5 1 km

MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

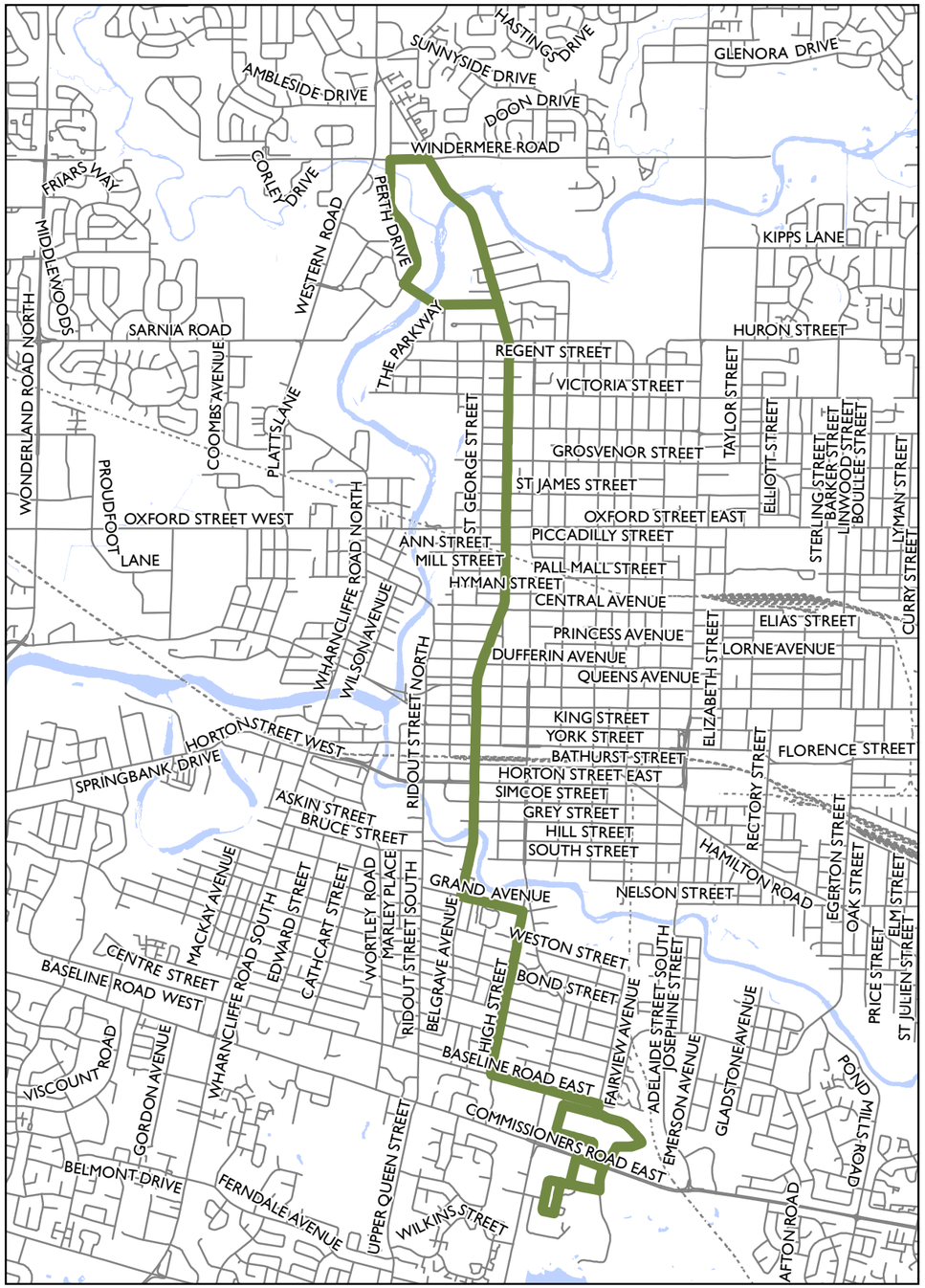
FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 188035
STATUS: FINAL
DATE: 2019-02-20

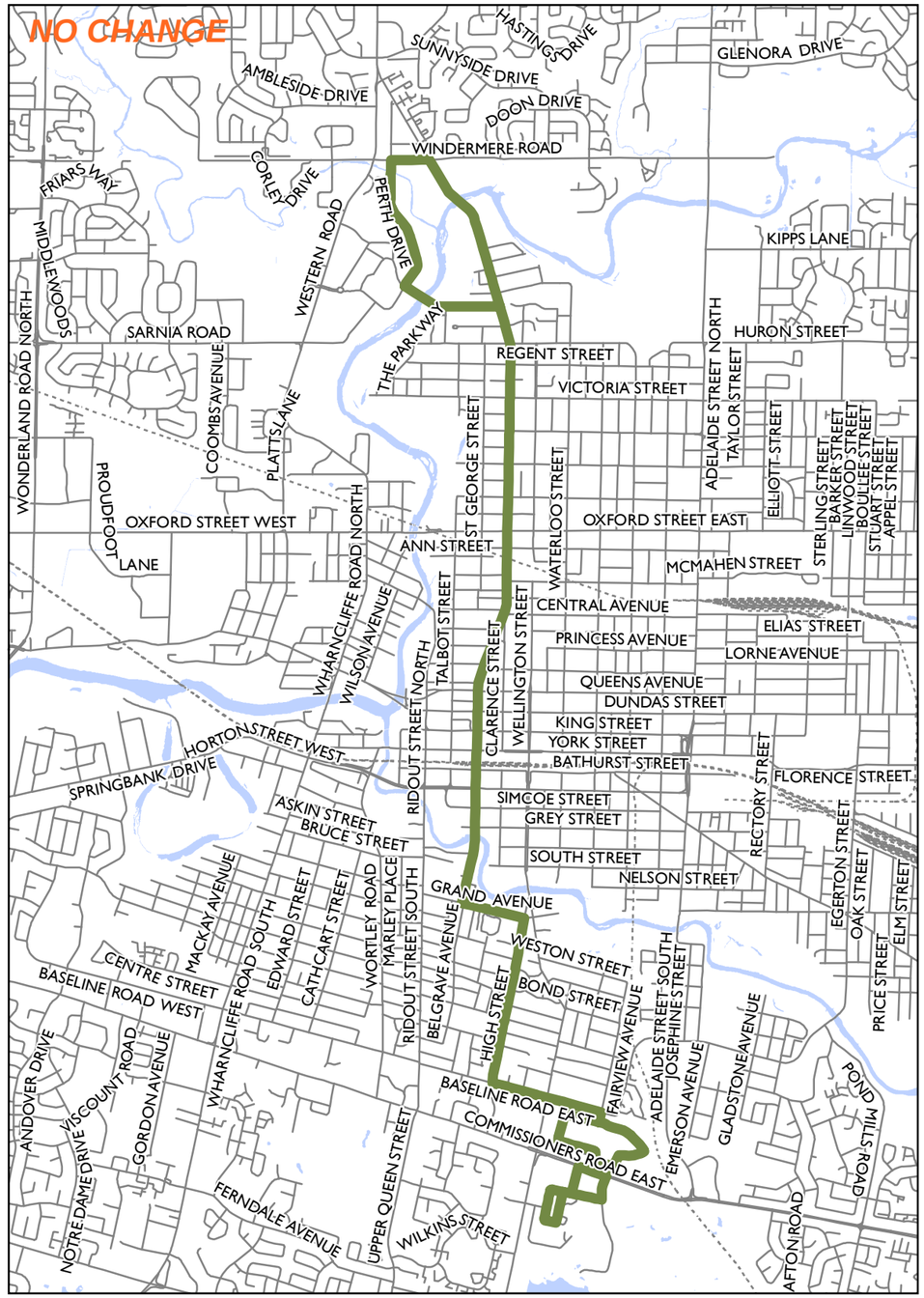
	WEEKDAY						SATURDAY					SUNDAY		
	EARLY AM	AM PEAK	BASE	PM PEAK	EARLY EVE	LATE EVE	EARLY AM	BASE	PEAK	EARLY EVE	LATE EVE	EARLY AM	DAY	EVENING
EXISTING 2019	30	30	30	30	60	60	60	60	32	60	60	60	60	60
PROPOSED 2024	30	20	30	20	30	30	30	30	30	30	30	30	30	30

PLANNED 2019 NETWORK



PROPOSED 2024 NETWORK

NO CHANGE



LONDON TRANSIT COMMISSION

5-YEAR SERVICE PLAN

LONDON TRANSIT NETWORK
ROUTE NUMBER: 6

- Municipal Boundary
- Railway
- Waterbody

Route
6

0 0.5 1 km

MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

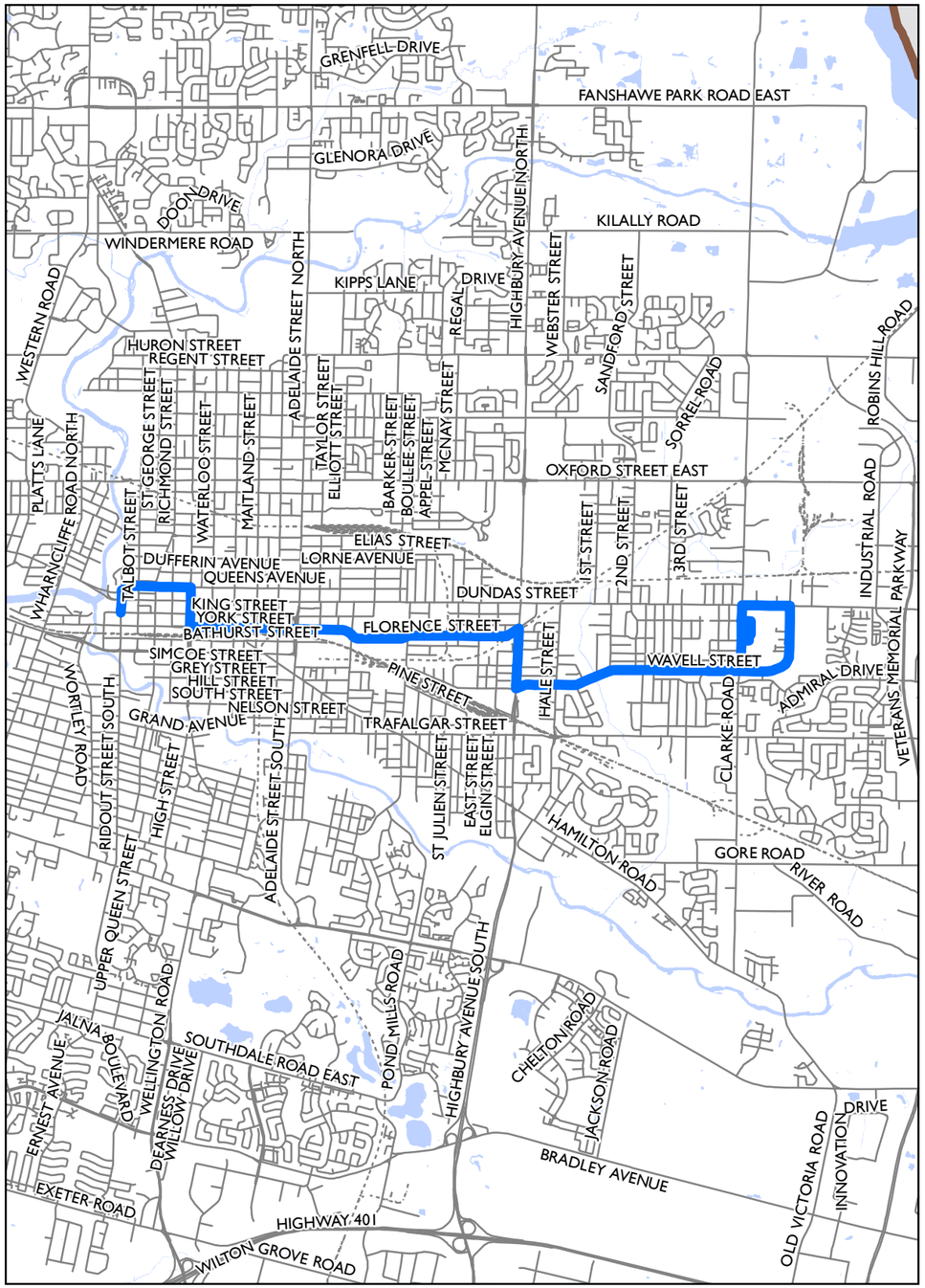
FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 188035
STATUS: FINAL
DATE: 2019-02-20

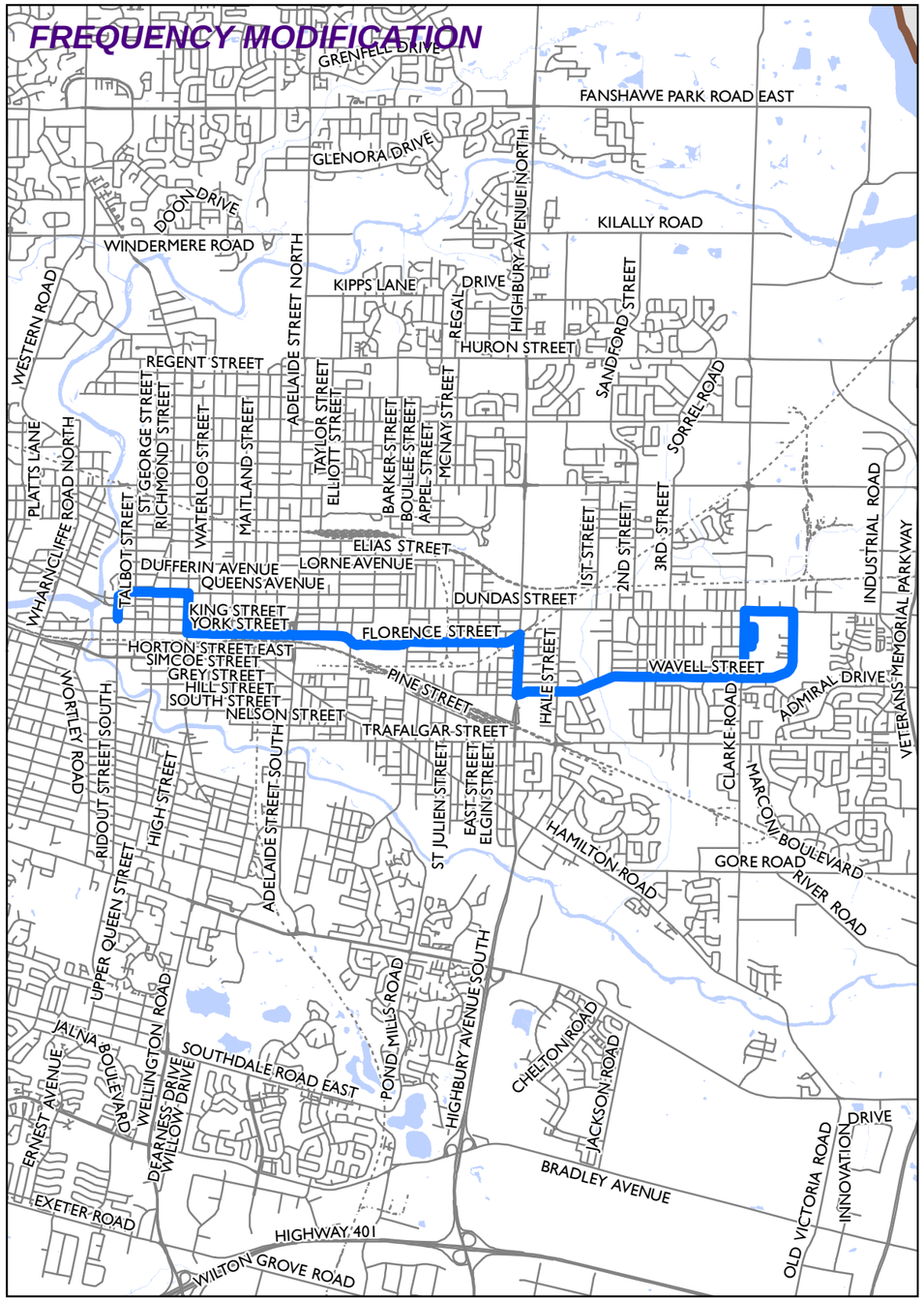
	WEEKDAY						SATURDAY					SUNDAY		
	EARLY AM	AM PEAK	BASE	PM PEAK	EARLY EVE	LATE EVE	EARLY AM	BASE	PEAK	EARLY EVE	LATE EVE	EARLY AM	DAY	EVENING
EXISTING 2019	35	25	30	30	25	35	55	35	25	25	35	35	25	35
PROPOSED 2024	35	25	30	30	25	35	55	35	25	25	35	35	25	35

PLANNED 2019 NETWORK



PROPOSED 2024 NETWORK

FREQUENCY MODIFICATION



LONDON TRANSIT COMMISSION

5-YEAR SERVICE PLAN

LONDON TRANSIT NETWORK
ROUTE NUMBER: 7

- Municipal Boundary
- Railway
- Waterbody

Route
7

0 0.5 1 km

MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

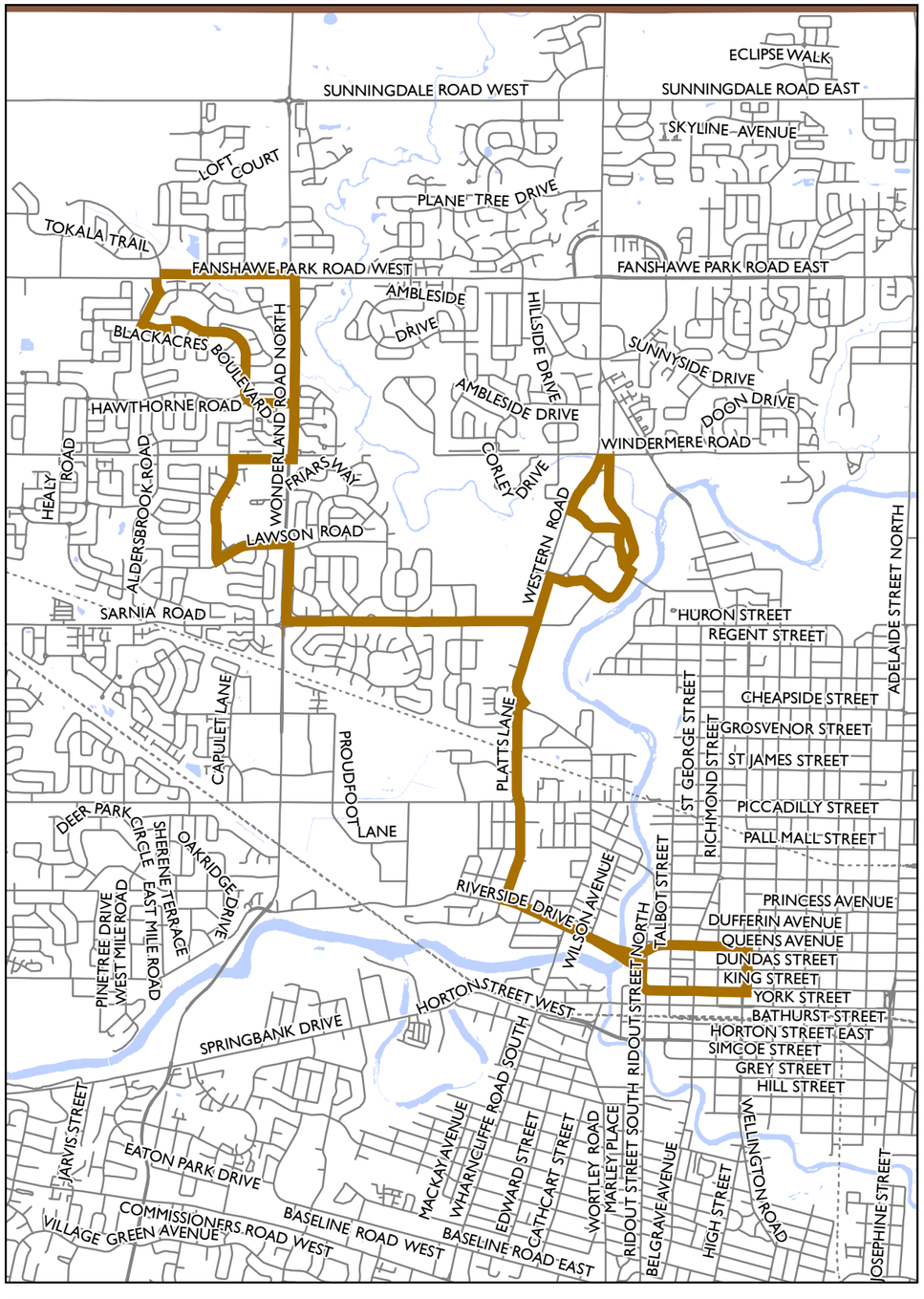
FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

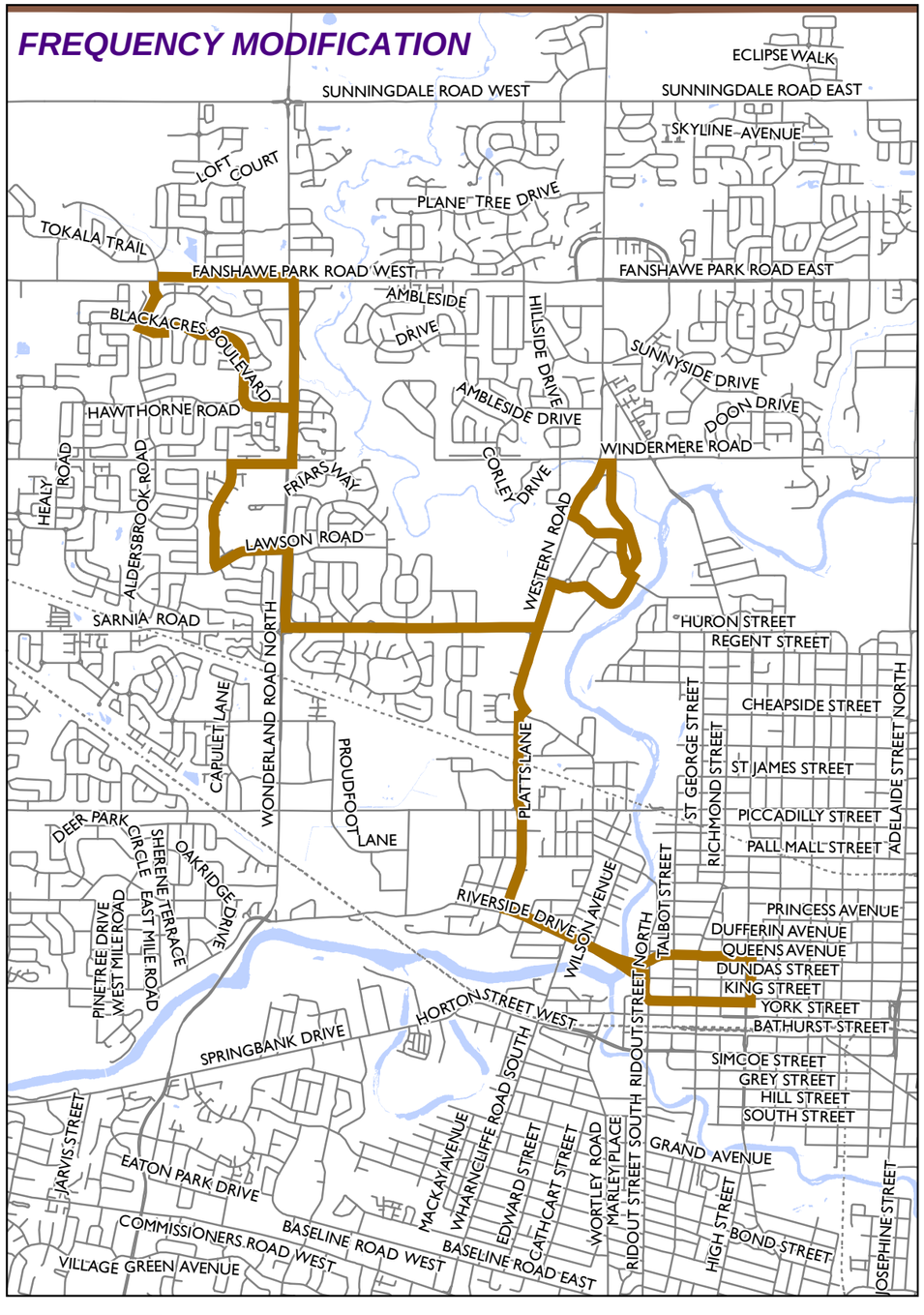
PROJECT: 188035
STATUS: FINAL
DATE: 2019-02-20

	WEEKDAY						SATURDAY					SUNDAY		
	EARLY AM	AM PEAK	BASE	PM PEAK	EARLY EVE	LATE EVE	EARLY AM	BASE	PEAK	EARLY EVE	LATE EVE	EARLY AM	DAY	EVENING
EXISTING 2019	30	20	30	20	30	30	60	30	30	30	30	30	30	30
PROPOSED 2024	30	20	30	20	30	30	30	30	30	30	30	30	30	30

PLANNED 2019 NETWORK



PROPOSED 2024 NETWORK



LONDON TRANSIT COMMISSION

5-YEAR SERVICE PLAN

LONDON TRANSIT NETWORK
ROUTE NUMBER: 9

- Municipal Boundary
- Railway
- Waterbody

Route
9

0 0.5 1 km

MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

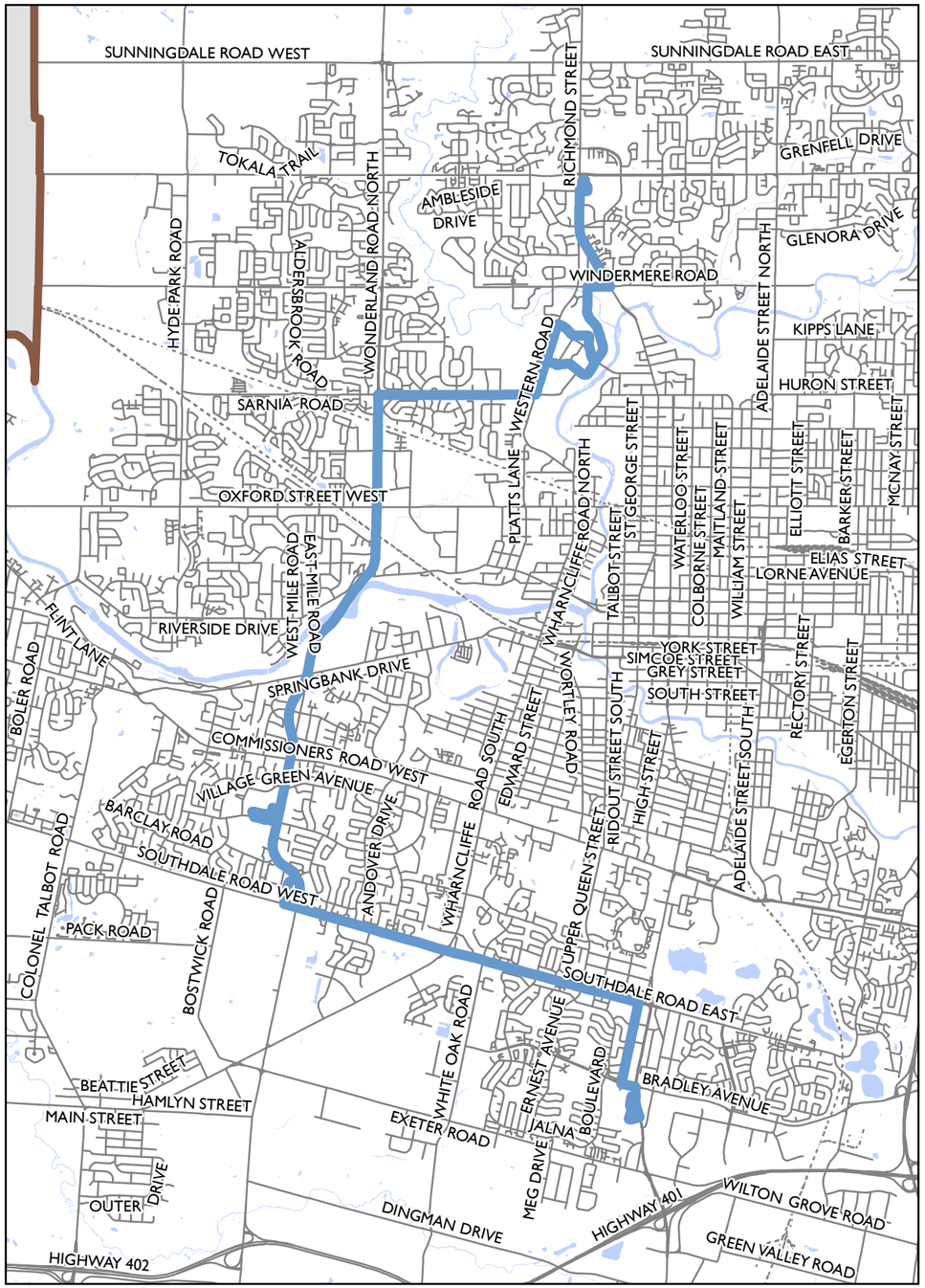
FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

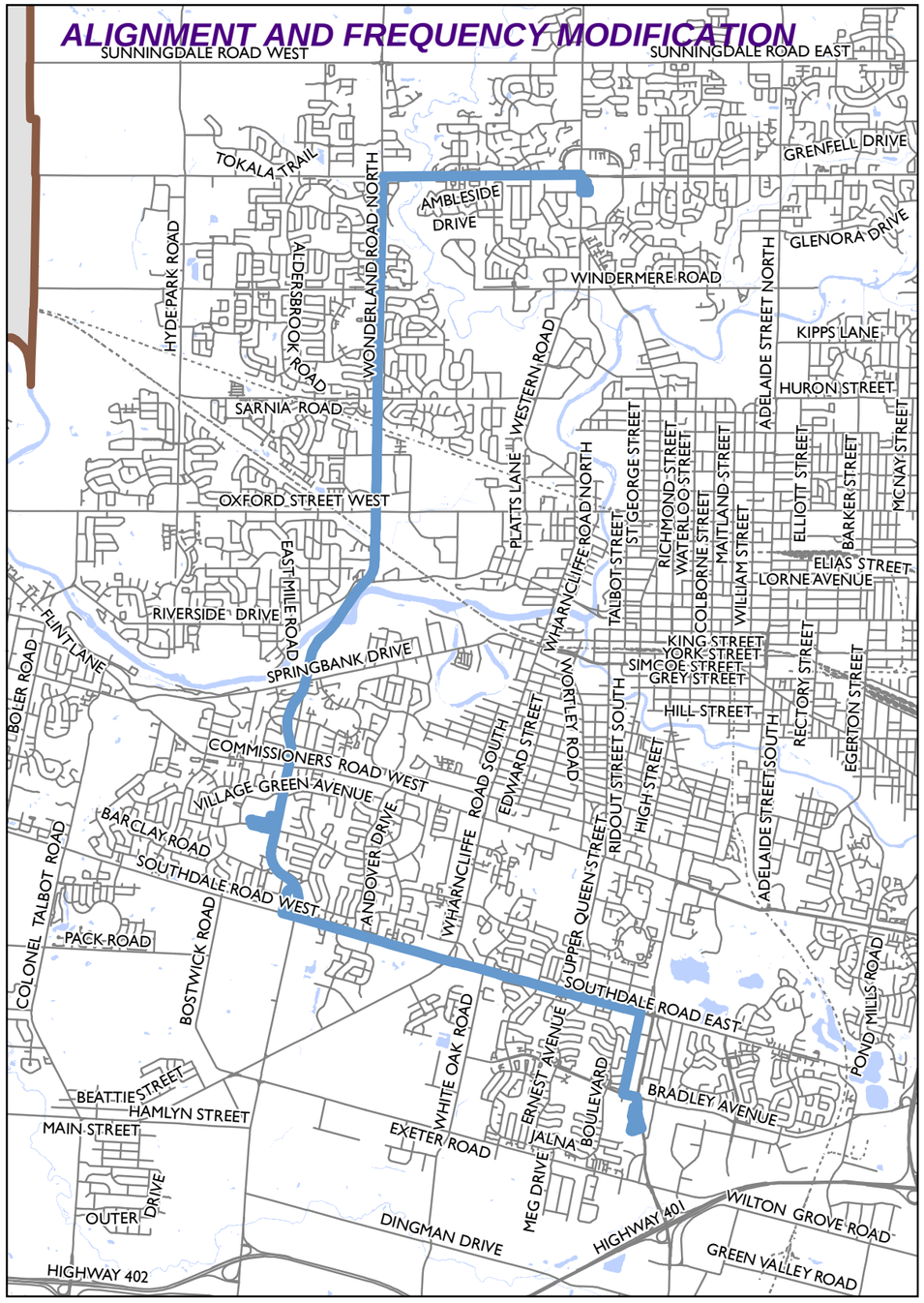
PROJECT: 188035
STATUS: FINAL
DATE: 2019-02-20

	WEEKDAY						SATURDAY					SUNDAY		
	EARLY AM	AM PEAK	BASE	PM PEAK	EARLY EVE	LATE EVE	EARLY AM	BASE	PEAK	EARLY EVE	LATE EVE	EARLY AM	DAY	EVENING
EXISTING 2019	17	16	15	15	22	32	60	32	23	32	30	33	23	30
PROPOSED 2024	17	16	15	15	22	32	30	32	23	32	30	33	23	30

PLANNED 2019 NETWORK



PROPOSED 2024 NETWORK



LONDON TRANSIT COMMISSION

5-YEAR SERVICE PLAN

LONDON TRANSIT NETWORK
ROUTE NUMBER: 10

- Municipal Boundary
- Railway
- Waterbody

Route
10

0 0.5 1 km

MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

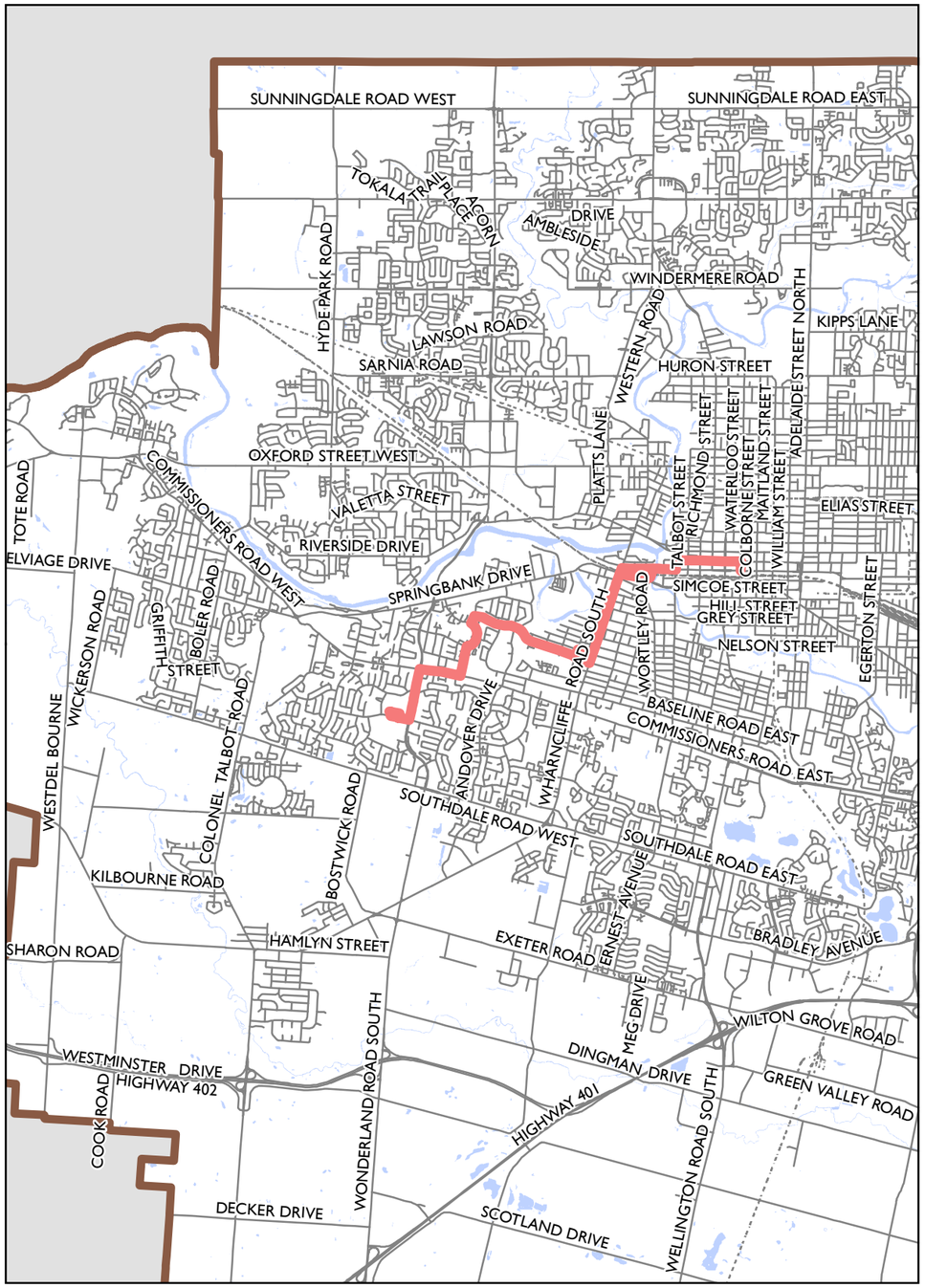
FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 188035
STATUS: FINAL
DATE: 2019-02-20

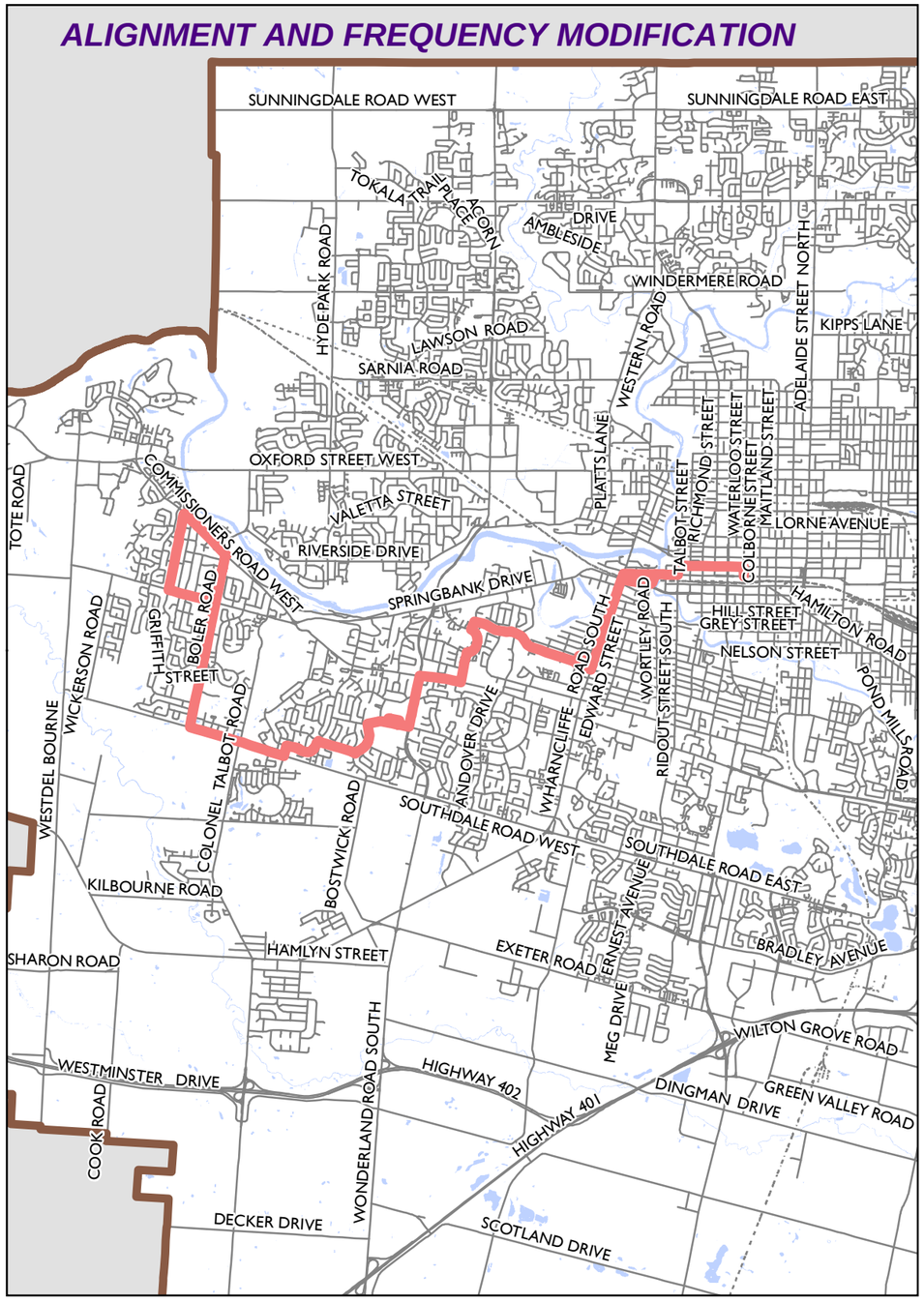
	WEEKDAY						SATURDAY					SUNDAY		
	EARLY AM	AM PEAK	BASE	PM PEAK	EARLY EVE	LATE EVE	EARLY AM	BASE	PEAK	EARLY EVE	LATE EVE	EARLY AM	DAY	EVENING
EXISTING 2019	30	20	30	20	30	30	35	30	30	30	30	30	30	60
PROPOSED 2024	30	20	30	20	20	30	35	30	30	30	30	30	30	30

PLANNED 2019 NETWORK



PROPOSED 2024 NETWORK

ALIGNMENT AND FREQUENCY MODIFICATION



LONDON TRANSIT COMMISSION

5-YEAR SERVICE PLAN

LONDON TRANSIT NETWORK
ROUTE NUMBER: 11

- Municipal Boundary
- Railway
- Waterbody

Route
11

0 0.5 1 km

MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

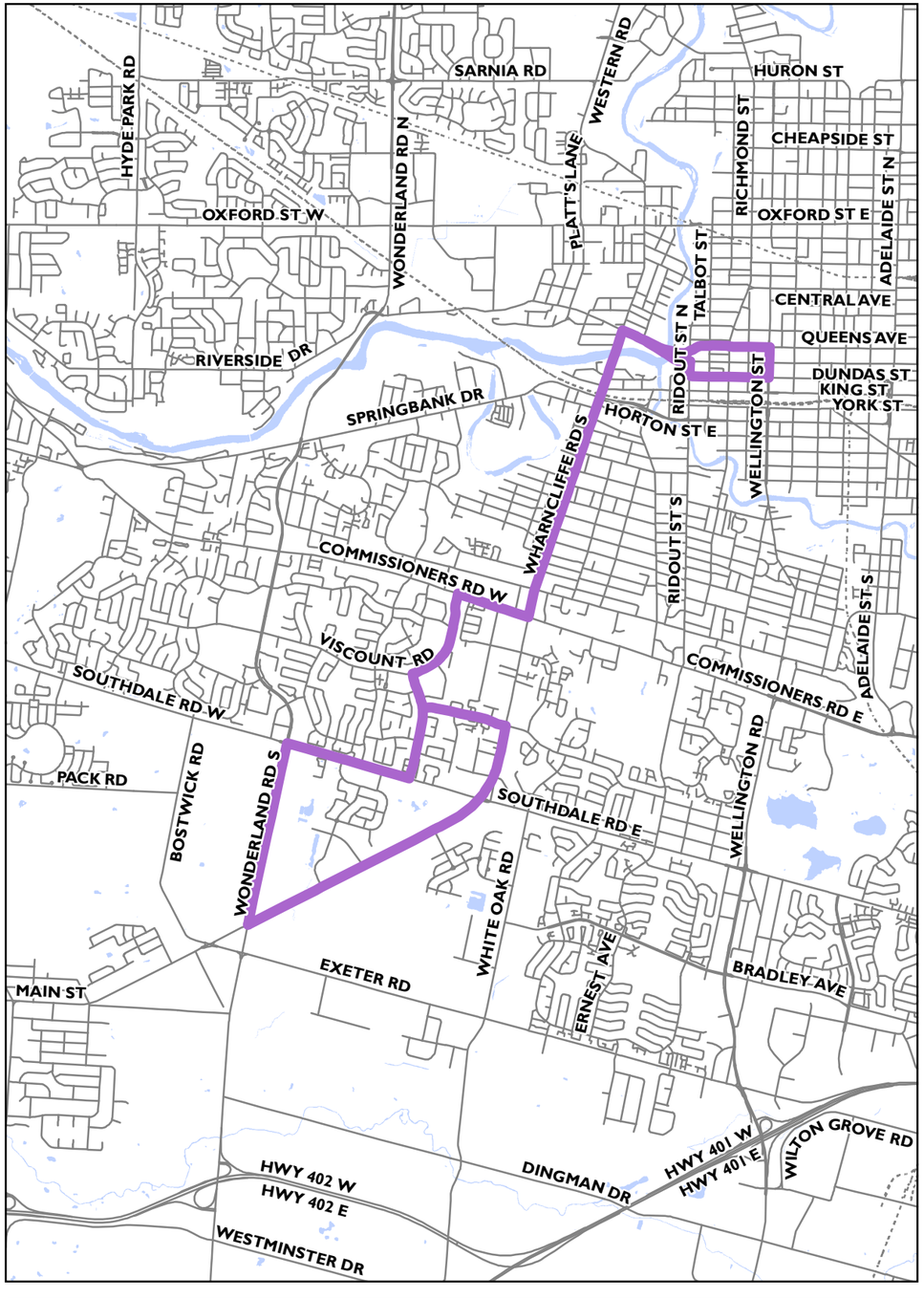
FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

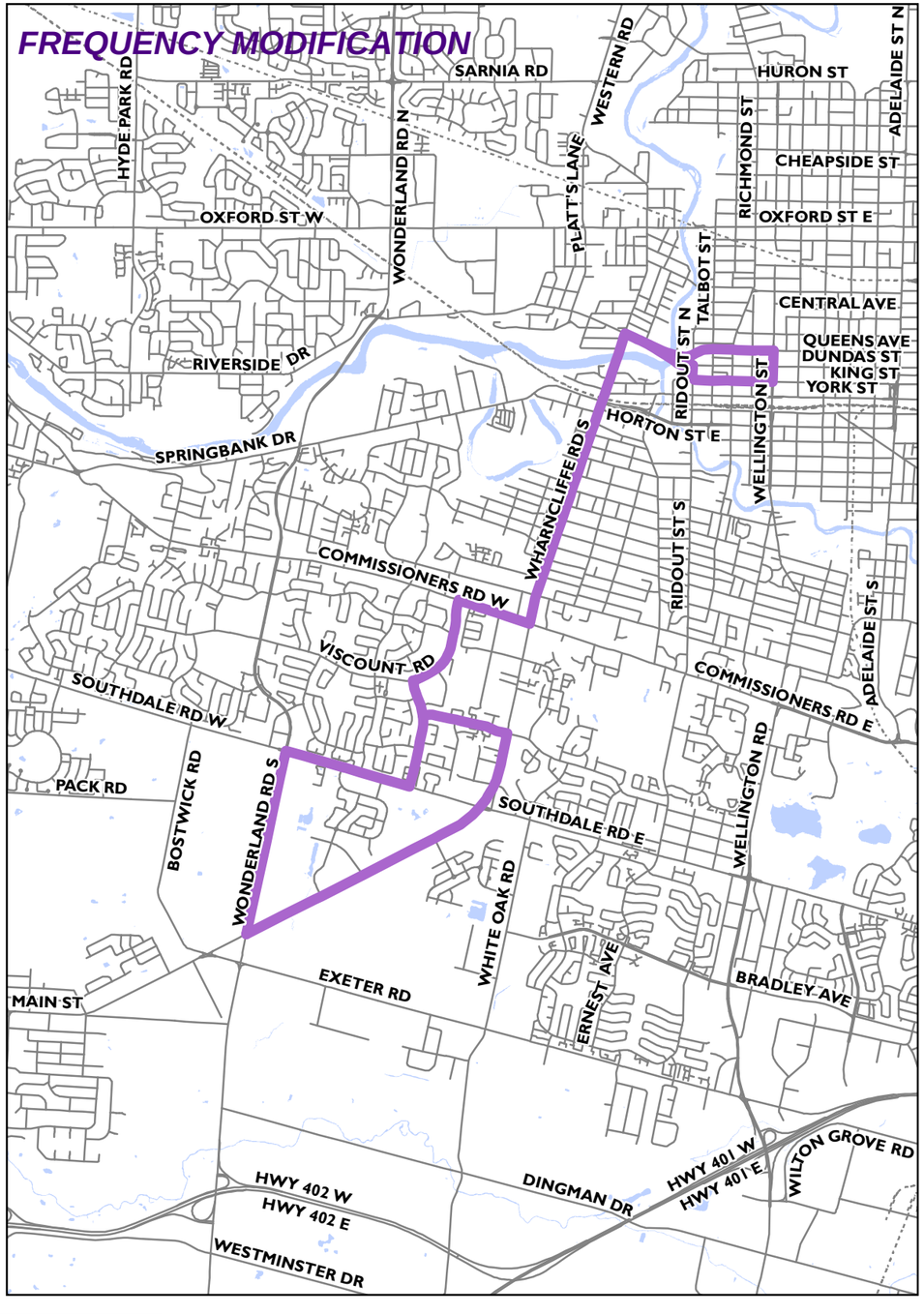
PROJECT: 188035
STATUS: FINAL
DATE: 2019-02-20

	WEEKDAY						SATURDAY					SUNDAY		
	EARLY AM	AM PEAK	BASE	PM PEAK	EARLY EVE	LATE EVE	EARLY AM	BASE	PEAK	EARLY EVE	LATE EVE	EARLY AM	DAY	EVENING
EXISTING 2019	30	20	30	20	30	30	60	30	30	30	30	30	30	30
PROPOSED 2024	30	20	30	20	30	30	30	30	30	30	30	30	30	30

PLANNED 2019 NETWORK



PROPOSED 2024 NETWORK



LONDON TRANSIT COMMISSION

5-YEAR SERVICE PLAN

LONDON TRANSIT NETWORK
ROUTE NUMBER: 12

- Municipal Boundary
- Railway
- Waterbody

Route
12

0 0.5 1 km

MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

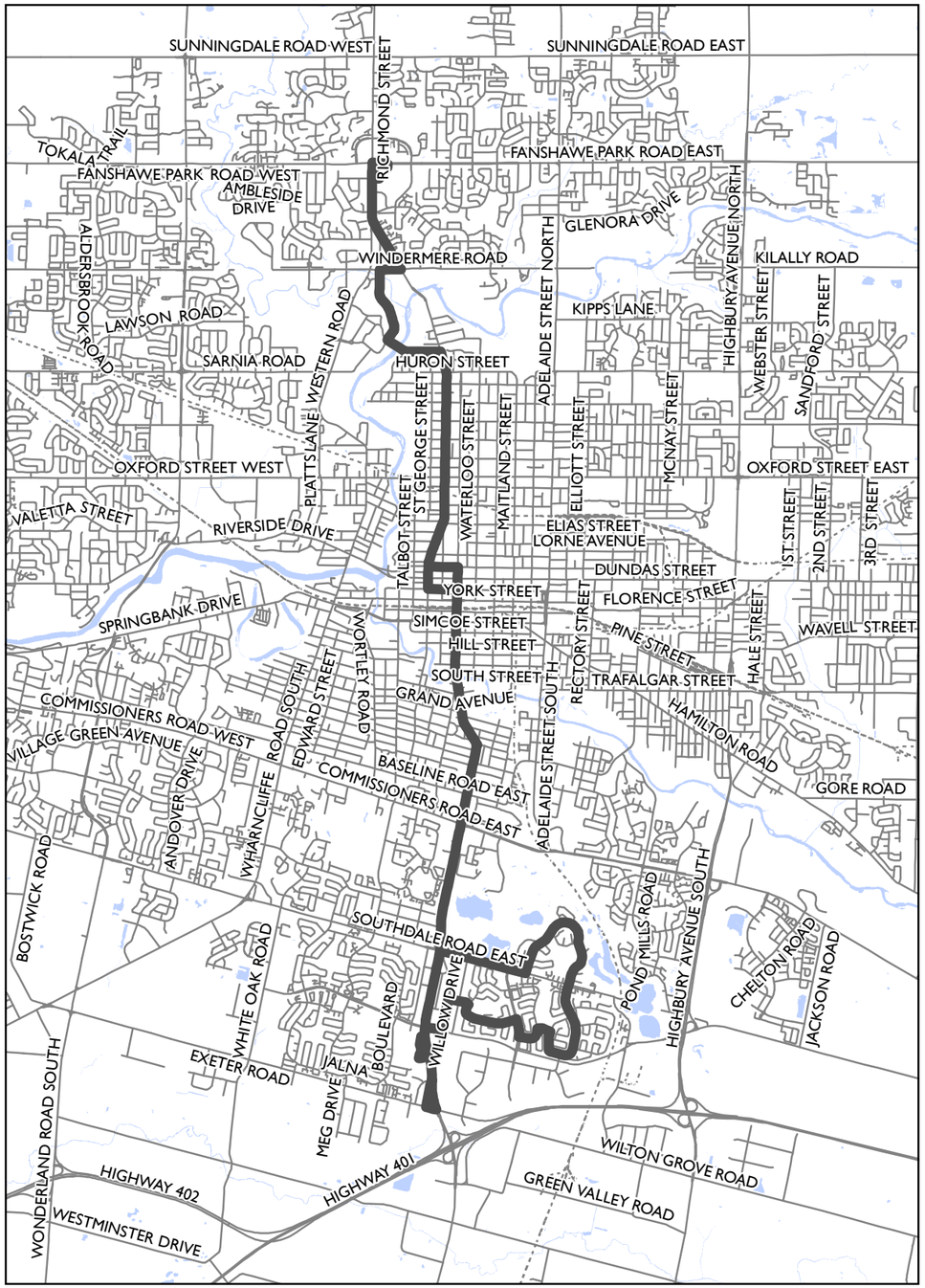
FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

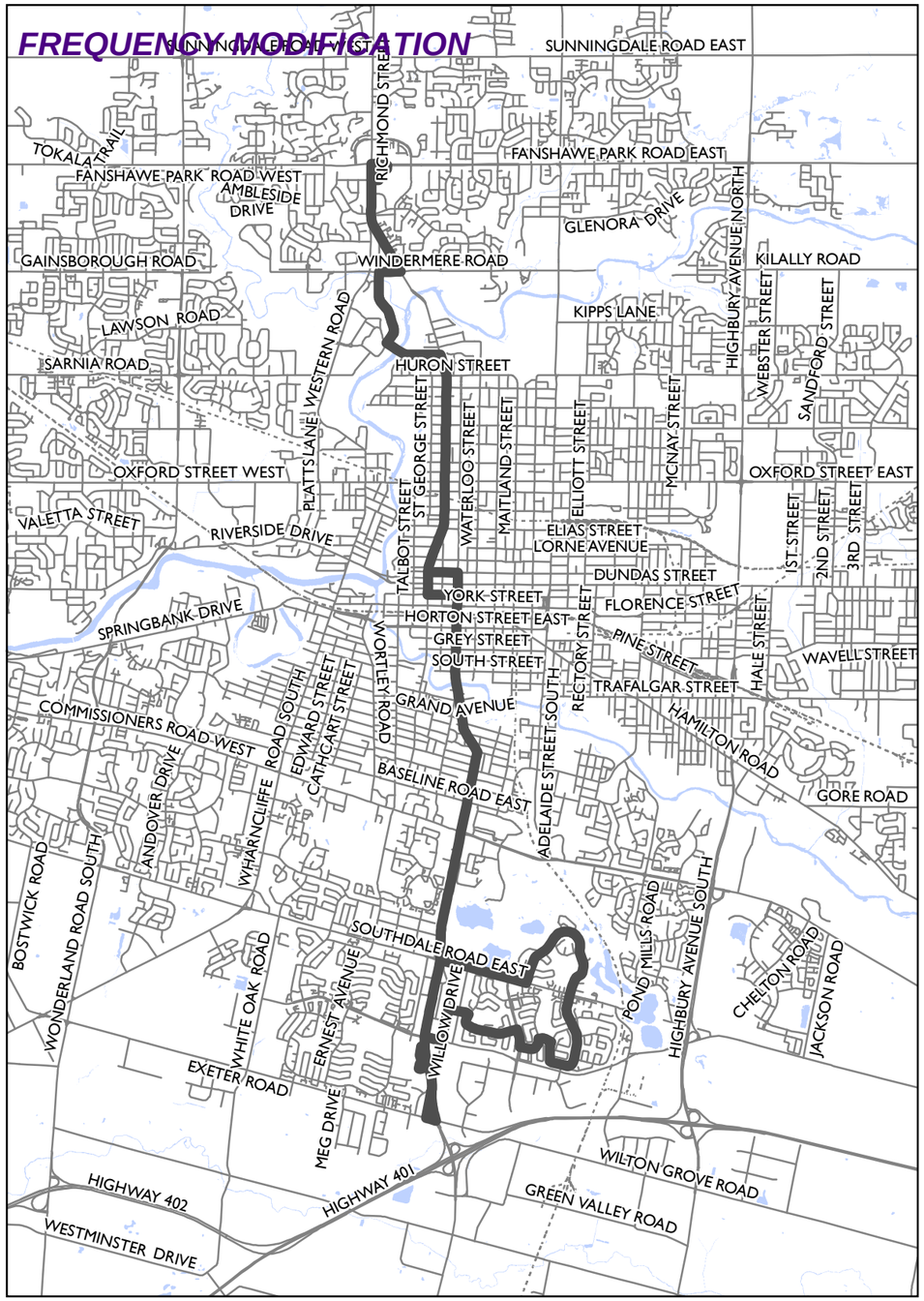
PROJECT: 188035
STATUS: FINAL
DATE: 2019-02-20

	WEEKDAY						SATURDAY					SUNDAY		
	EARLY AM	AM PEAK	BASE	PM PEAK	EARLY EVE	LATE EVE	EARLY AM	BASE	PEAK	EARLY EVE	LATE EVE	EARLY AM	DAY	EVENING
EXISTING 2019	30	30	30	25	30	60	50	60	50	30	60	60	60	60
PROPOSED 2024	30	30	30	25	30	30	30	30	30	30	30	30	30	30

PLANNED 2019 NETWORK



PROPOSED 2024 NETWORK



LONDON TRANSIT COMMISSION

5-YEAR SERVICE PLAN

LONDON TRANSIT NETWORK
ROUTE NUMBER: 13

- Municipal Boundary
- Railway
- Waterbody

Route
13

0 0.5 1 km

MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

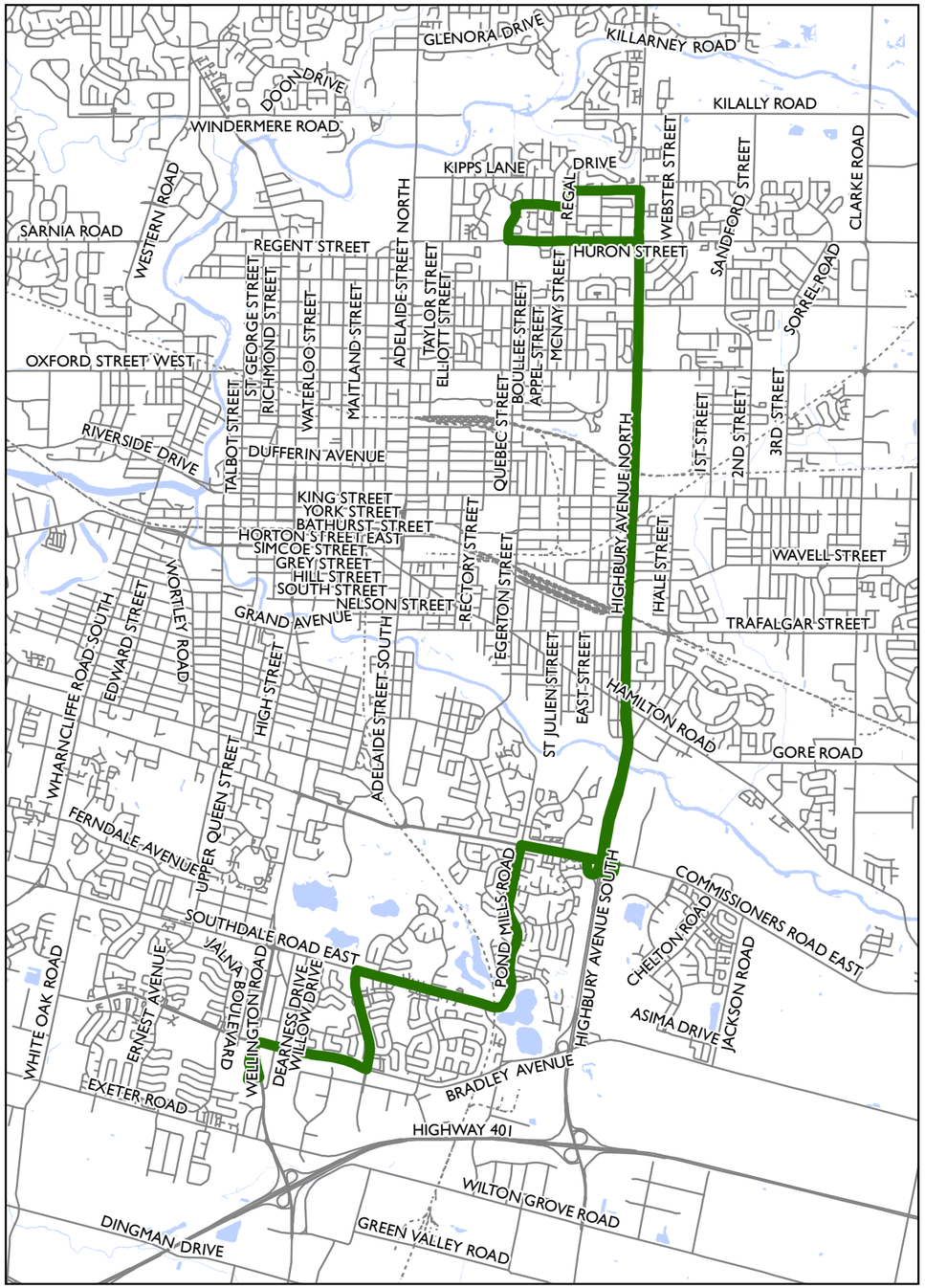
FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

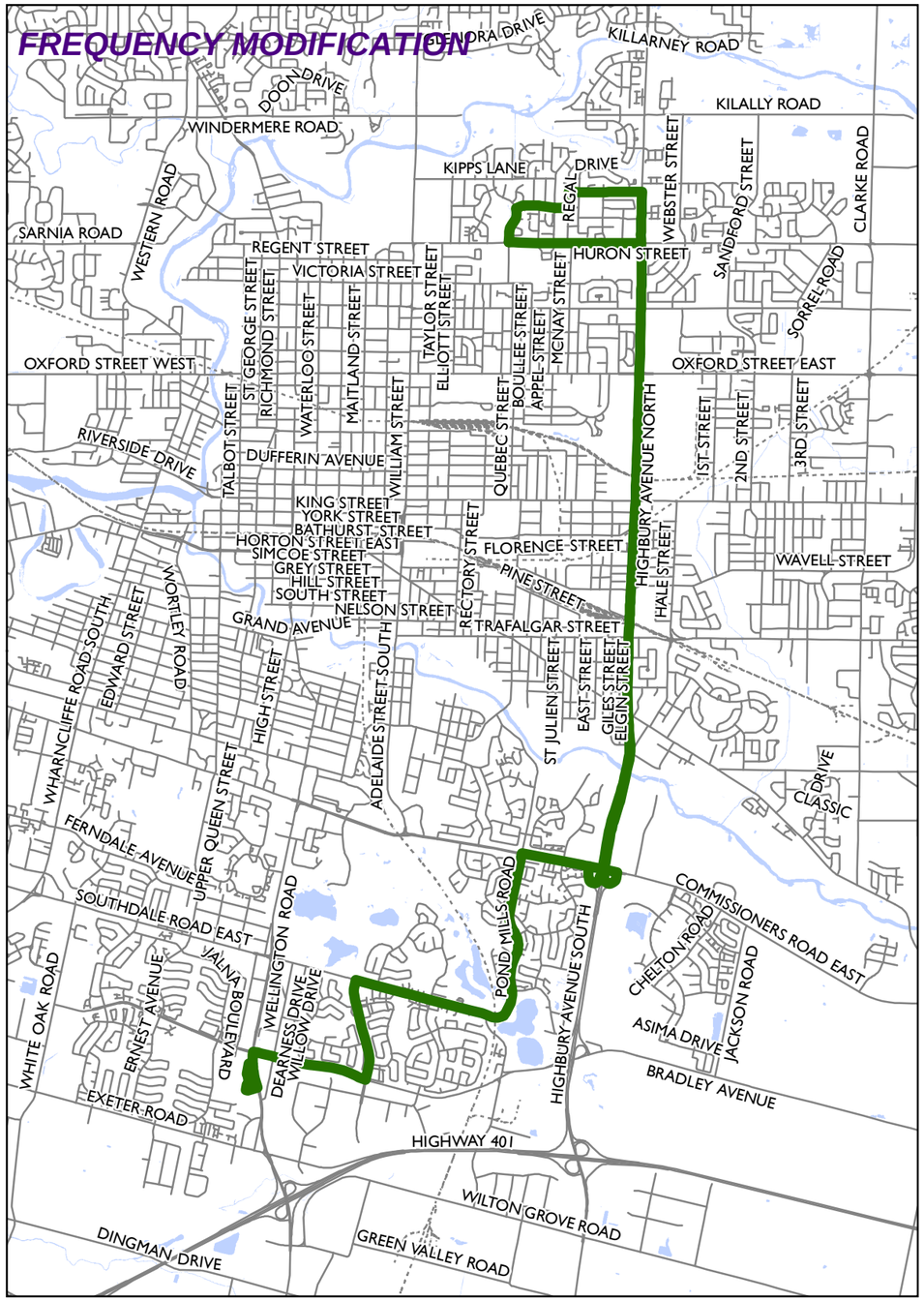
PROJECT: 188035
STATUS: FINAL
DATE: 2019-02-20

	WEEKDAY						SATURDAY					SUNDAY		
	EARLY AM	AM PEAK	BASE	PM PEAK	EARLY EVE	LATE EVE	EARLY AM	BASE	PEAK	EARLY EVE	LATE EVE	EARLY AM	DAY	EVENING
EXISTING 2019	15	16	15	15	20	30	35	15	15	20	30	30	30	30
PROPOSED 2024	15	16	15	15	20	30	35	15	15	20	30	30	20	20

PLANNED 2019 NETWORK



PROPOSED 2024 NETWORK



LONDON TRANSIT COMMISSION

5-YEAR SERVICE PLAN

LONDON TRANSIT NETWORK
ROUTE NUMBER: 14

- Municipal Boundary
- Railway
- Waterbody

Route
14

0 0.5 1 km

MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

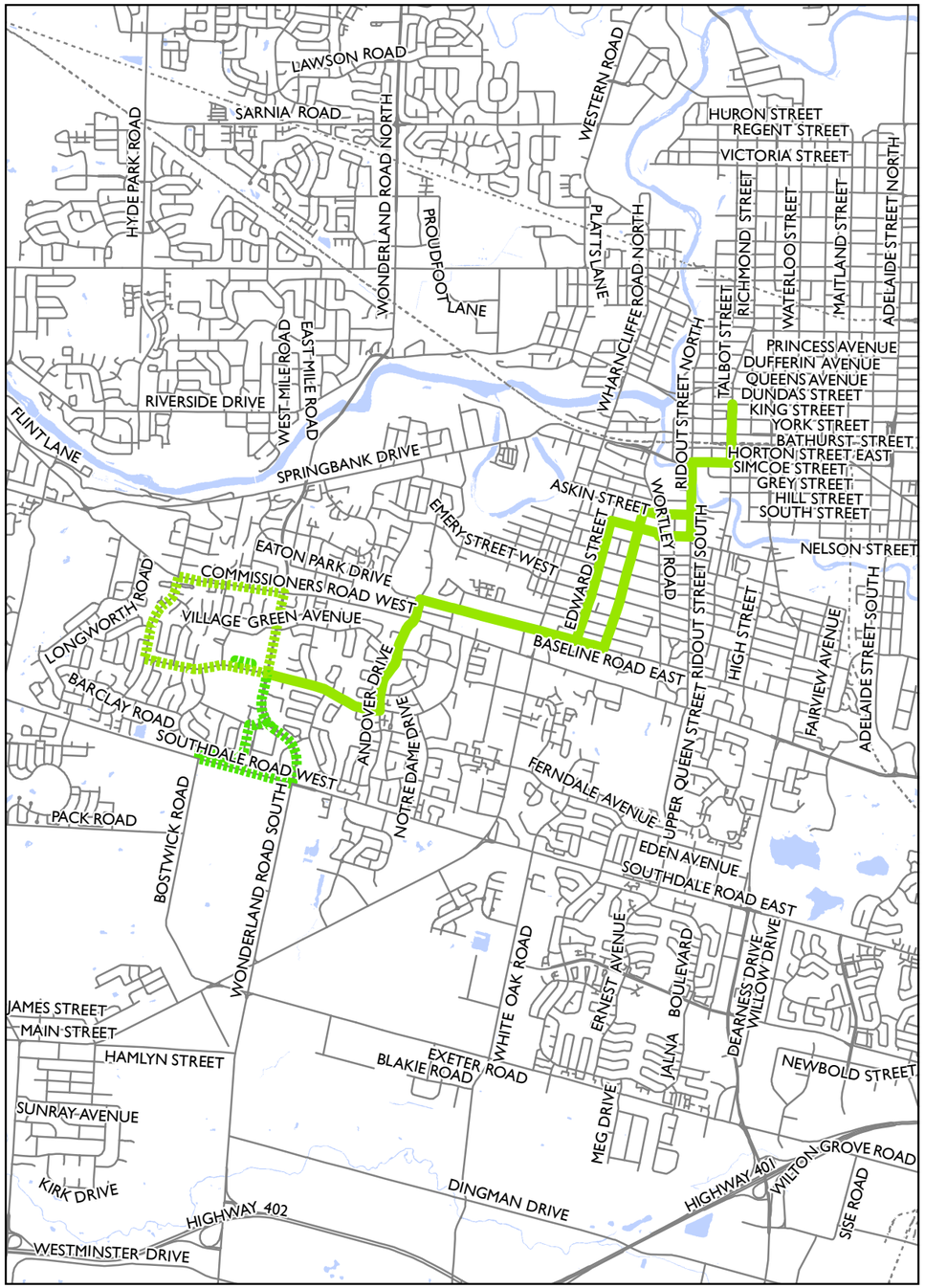
FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

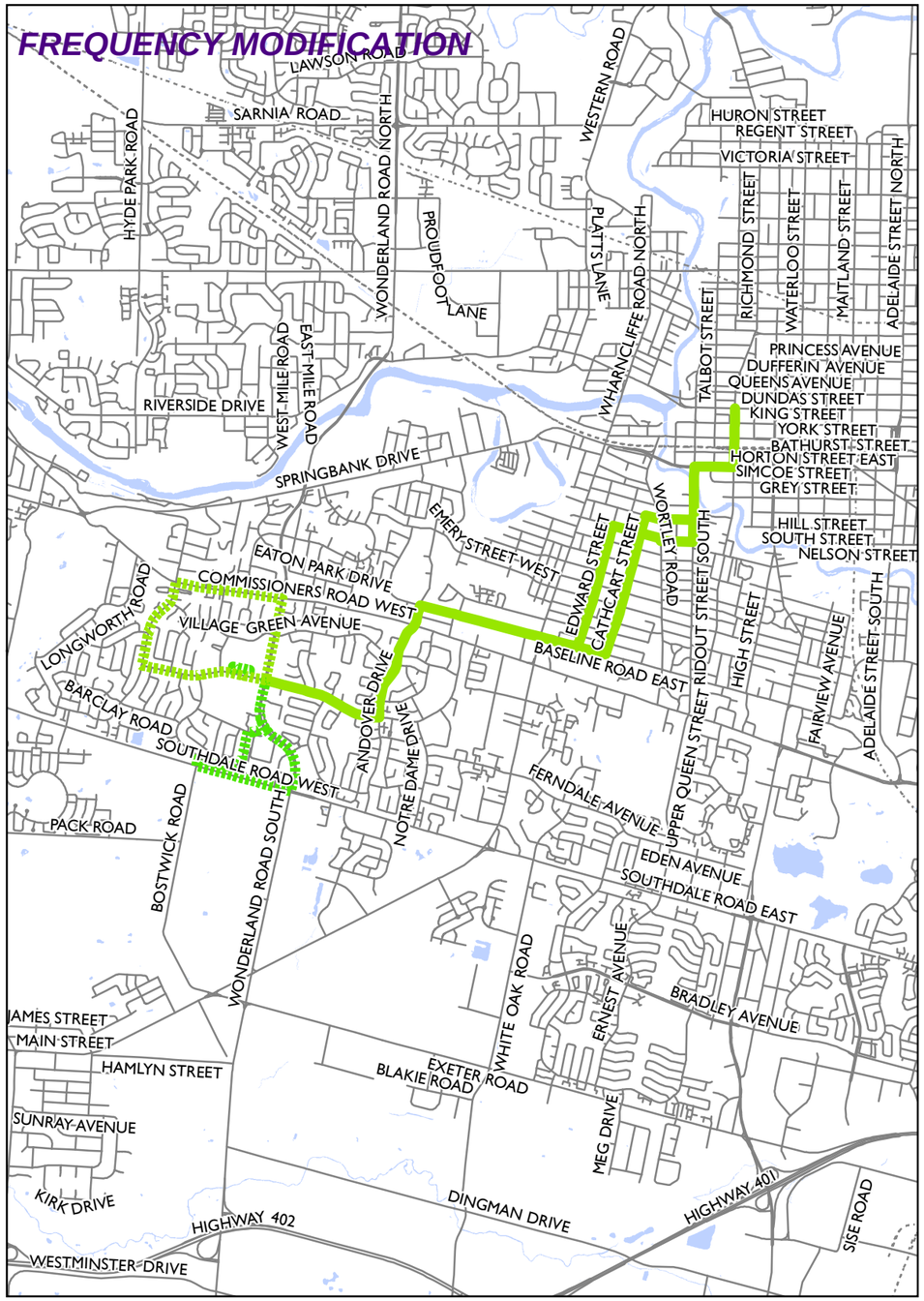
PROJECT: 188035
STATUS: FINAL
DATE: 2019-02-20

	WEEKDAY						SATURDAY					SUNDAY		
	EARLY AM	AM PEAK	BASE	PM PEAK	EARLY EVE	LATE EVE	EARLY AM	BASE	PEAK	EARLY EVE	LATE EVE	EARLY AM	DAY	EVENING
EXISTING 2019	30	20	30	20	30	30	35	30	30	30	30	30	30	60
PROPOSED 2024	30	20	30	20	20	30	35	30	30	30	30	30	30	30

PLANNED 2019 NETWORK



PROPOSED 2024 NETWORK



LONDON TRANSIT COMMISSION

5-YEAR SERVICE PLAN

LONDON TRANSIT NETWORK
ROUTE NUMBER: 15

- Municipal Boundary
- Railway
- Waterbody

Route

- 15B
- 15A
- 15

0 0.5 1 km

MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

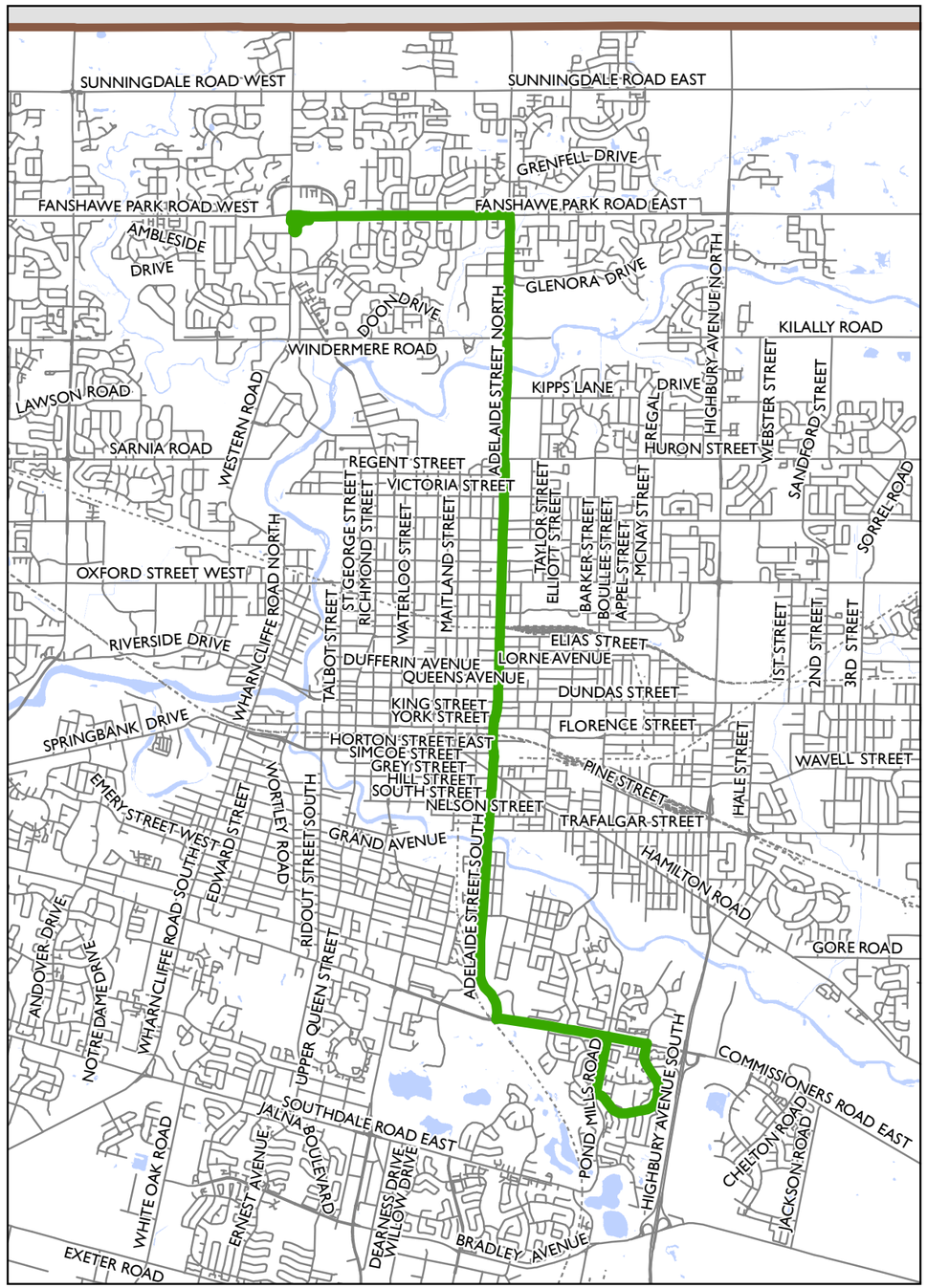
FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

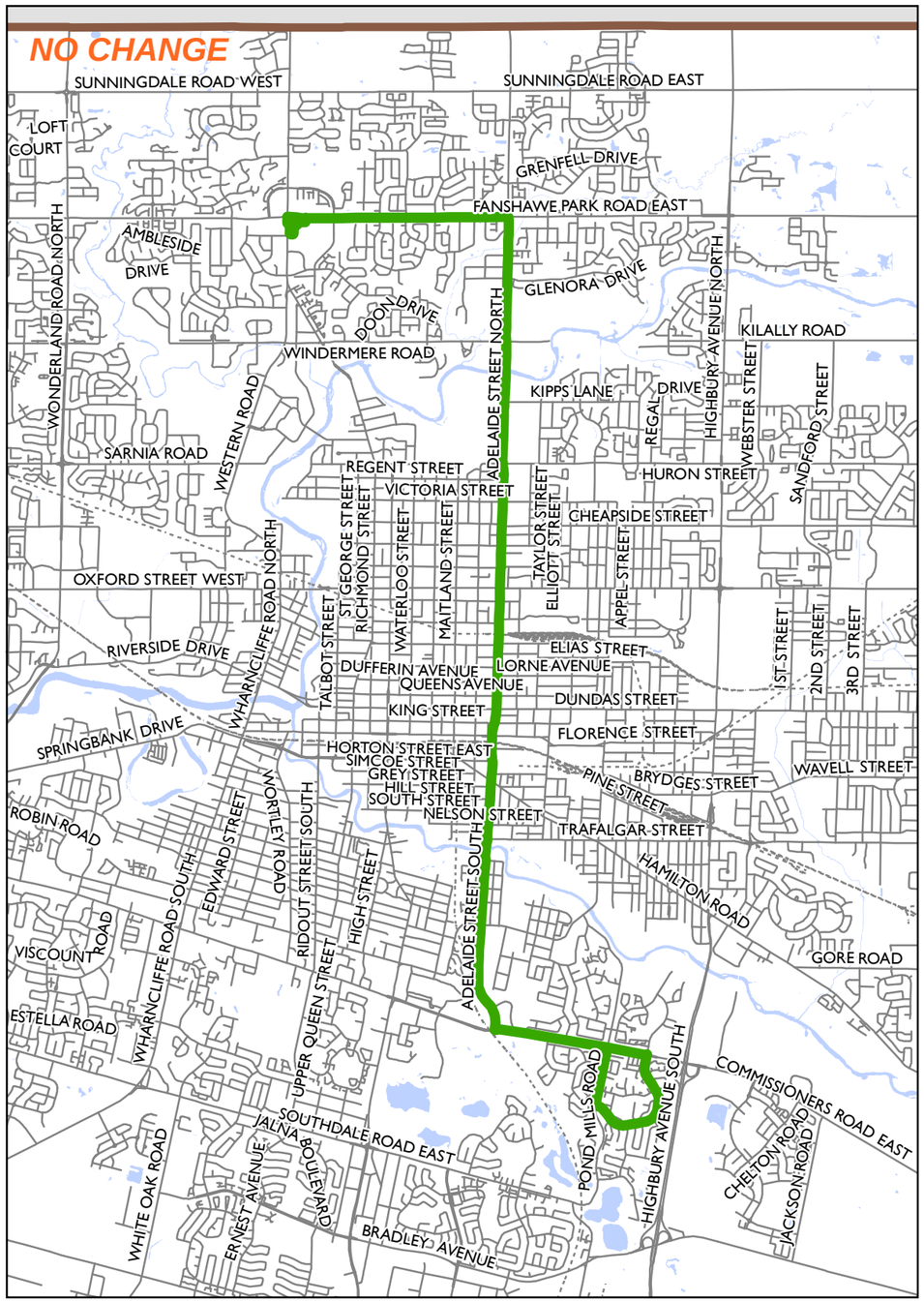
PROJECT: 188035
STATUS: FINAL
DATE: 2019-02-20

	WEEKDAY						SATURDAY					SUNDAY		
	EARLY AM	AM PEAK	BASE	PM PEAK	EARLY EVE	LATE EVE	EARLY AM	BASE	PEAK	EARLY EVE	LATE EVE	EARLY AM	DAY	EVENING
EXISTING 2019	20	16	15	15	30	30	30	30	20	30	30	30	30	30
PROPOSED 2024	20	16	15	15	30	30	30	30	20	30	30	30	20	30

PLANNED 2019 NETWORK



PROPOSED 2024 NETWORK



LONDON TRANSIT COMMISSION

5-YEAR SERVICE PLAN

LONDON TRANSIT NETWORK
ROUTE NUMBER: 16

- Municipal Boundary
- Railway
- Waterbody

Route
16

0 0.5 1 km

MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

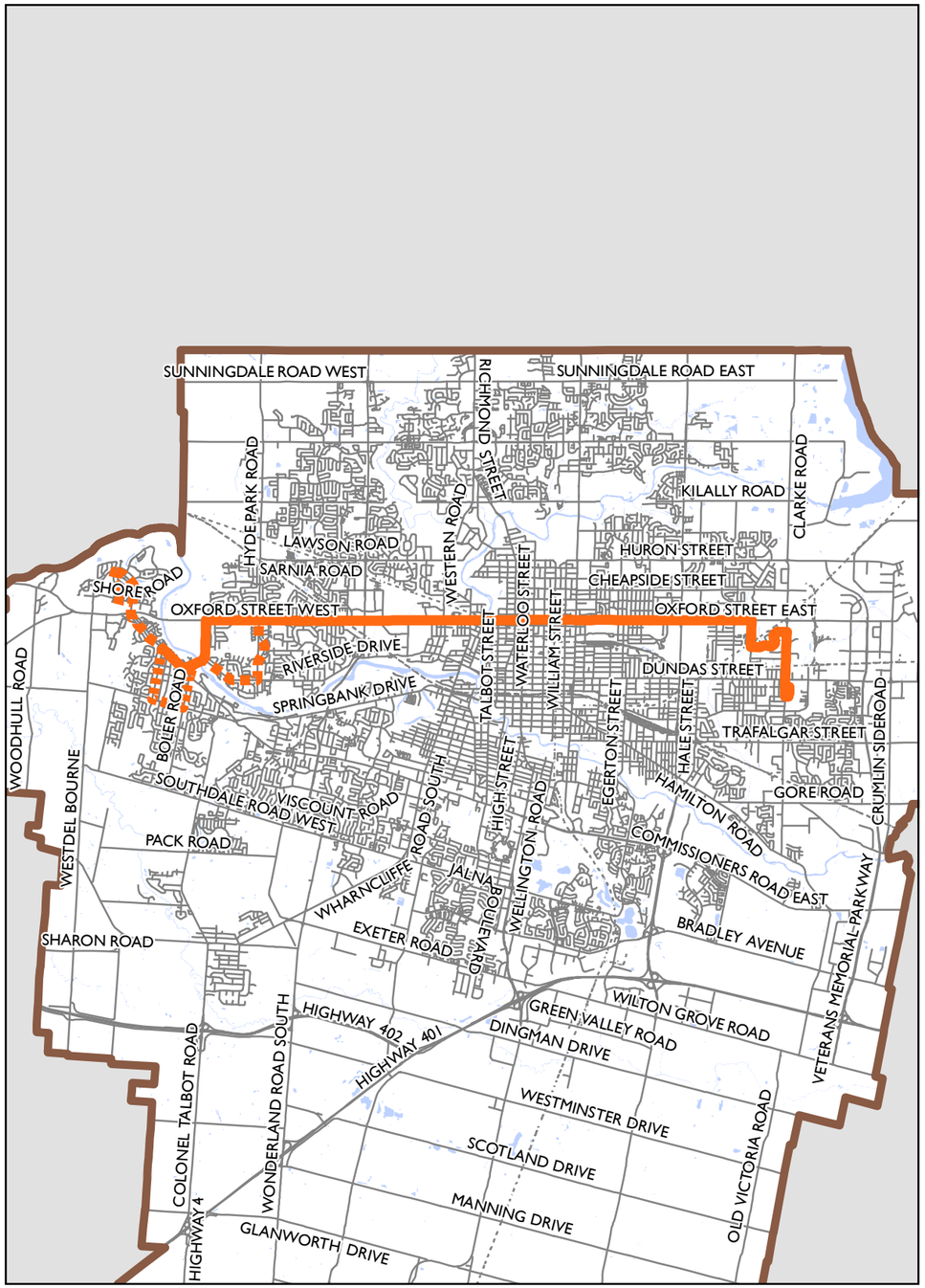
FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 188035
STATUS: FINAL
DATE: 2019-02-20

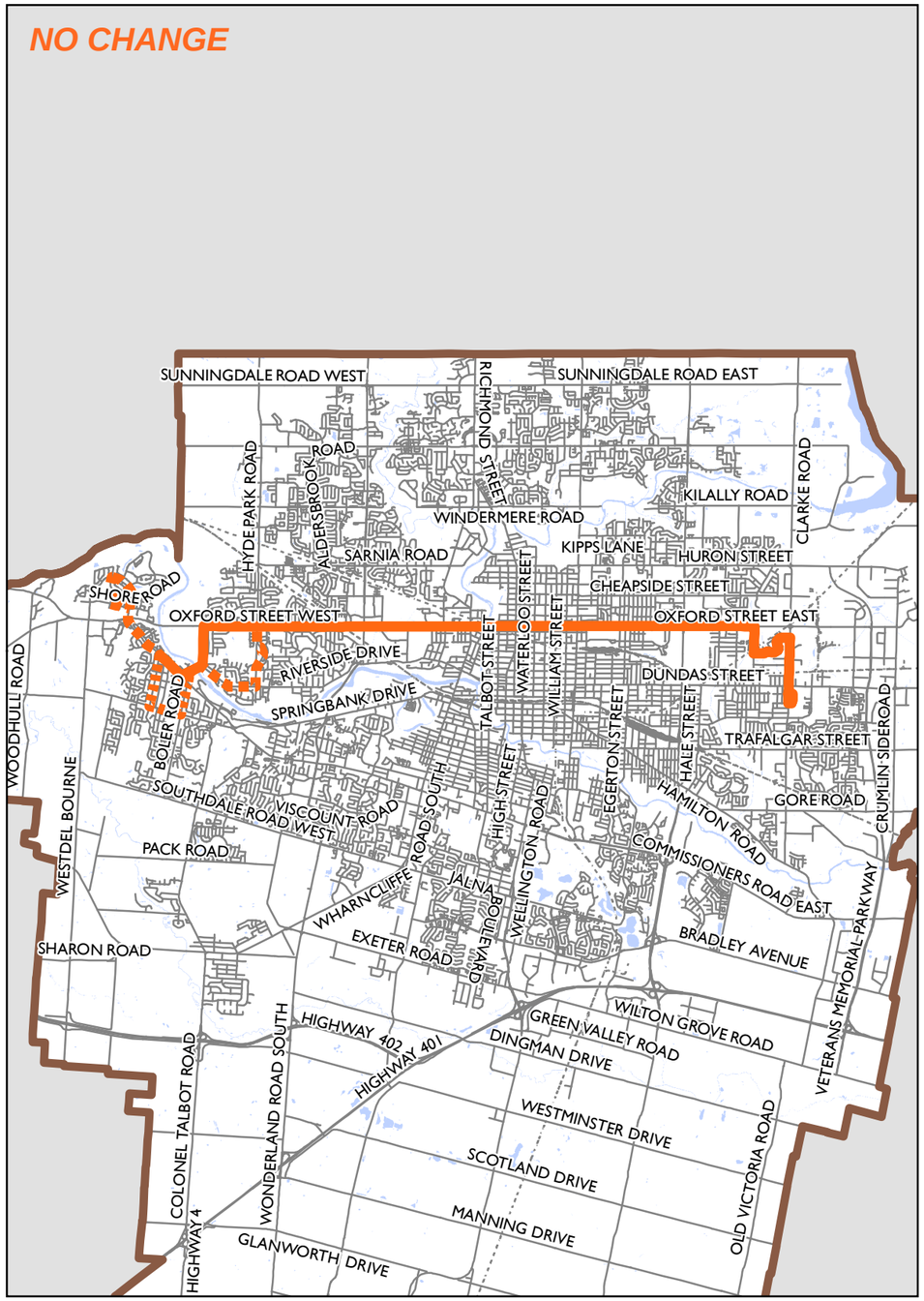
	WEEKDAY						SATURDAY					SUNDAY		
	EARLY AM	AM PEAK	BASE	PM PEAK	EARLY EVE	LATE EVE	EARLY AM	BASE	PEAK	EARLY EVE	LATE EVE	EARLY AM	DAY	EVENING
EXISTING 2019	18	15	16	14	20	25	25	21	15	20	25	33	33	30
PROPOSED 2024	18	15	16	14	20	25	25	21	15	20	25	33	33	30

PLANNED 2019 NETWORK



PROPOSED 2024 NETWORK

NO CHANGE



LONDON TRANSIT COMMISSION

5-YEAR SERVICE PLAN

LONDON TRANSIT NETWORK
ROUTE NUMBER: 17

- Municipal Boundary
- Railway
- Waterbody

Route
- 17
- 17A
- 17B

0 0.5 1 km

MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

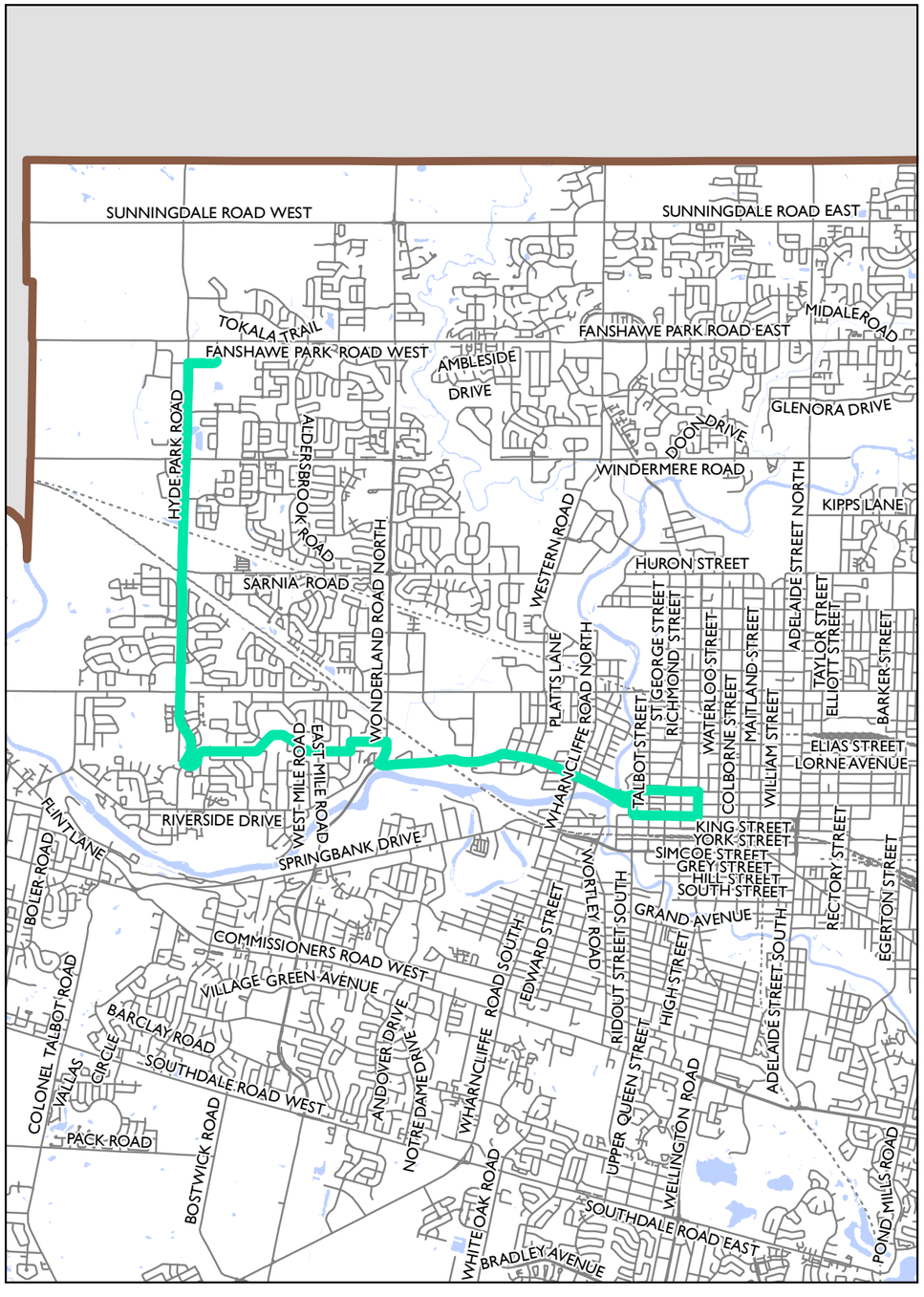
FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 188035
STATUS: FINAL
DATE: 2019-02-20

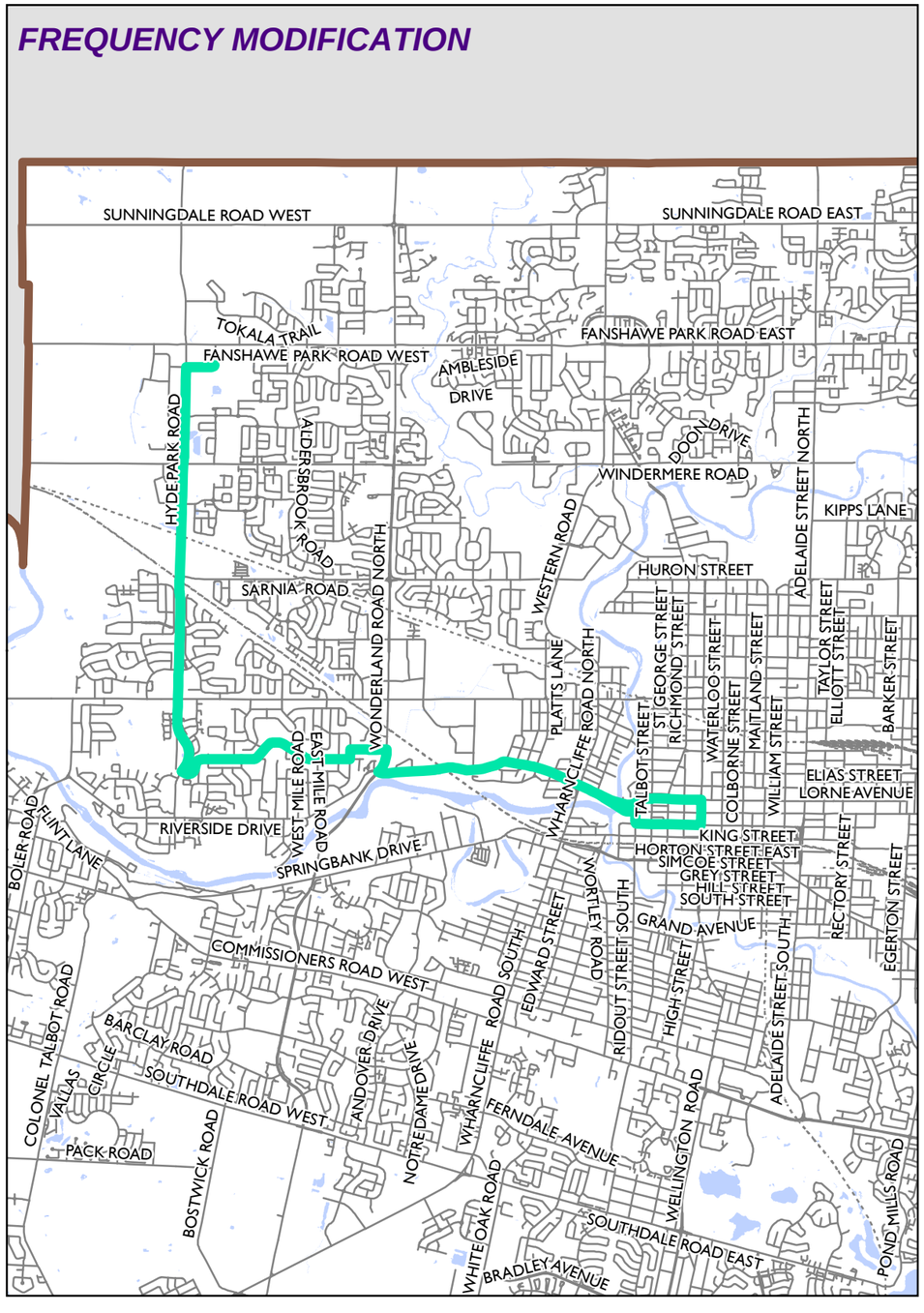
	WEEKDAY						SATURDAY					SUNDAY		
	EARLY AM	AM PEAK	BASE	PM PEAK	EARLY EVE	LATE EVE	EARLY AM	BASE	PEAK	EARLY EVE	LATE EVE	EARLY AM	DAY	EVENING
EXISTING 2019	20	20	20	20	20	30	40	40	30	30	30	30	30	40
PROPOSED 2024	20	20	20	20	20	30	30	30	30	30	30	30	30	40

PLANNED 2019 NETWORK



PROPOSED 2024 NETWORK

FREQUENCY MODIFICATION



LONDON TRANSIT COMMISSION

5-YEAR SERVICE PLAN

LONDON TRANSIT NETWORK
ROUTE NUMBER: 19

- Municipal Boundary
- Railway
- Waterbody

Route
19

0 0.5 1 km

MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

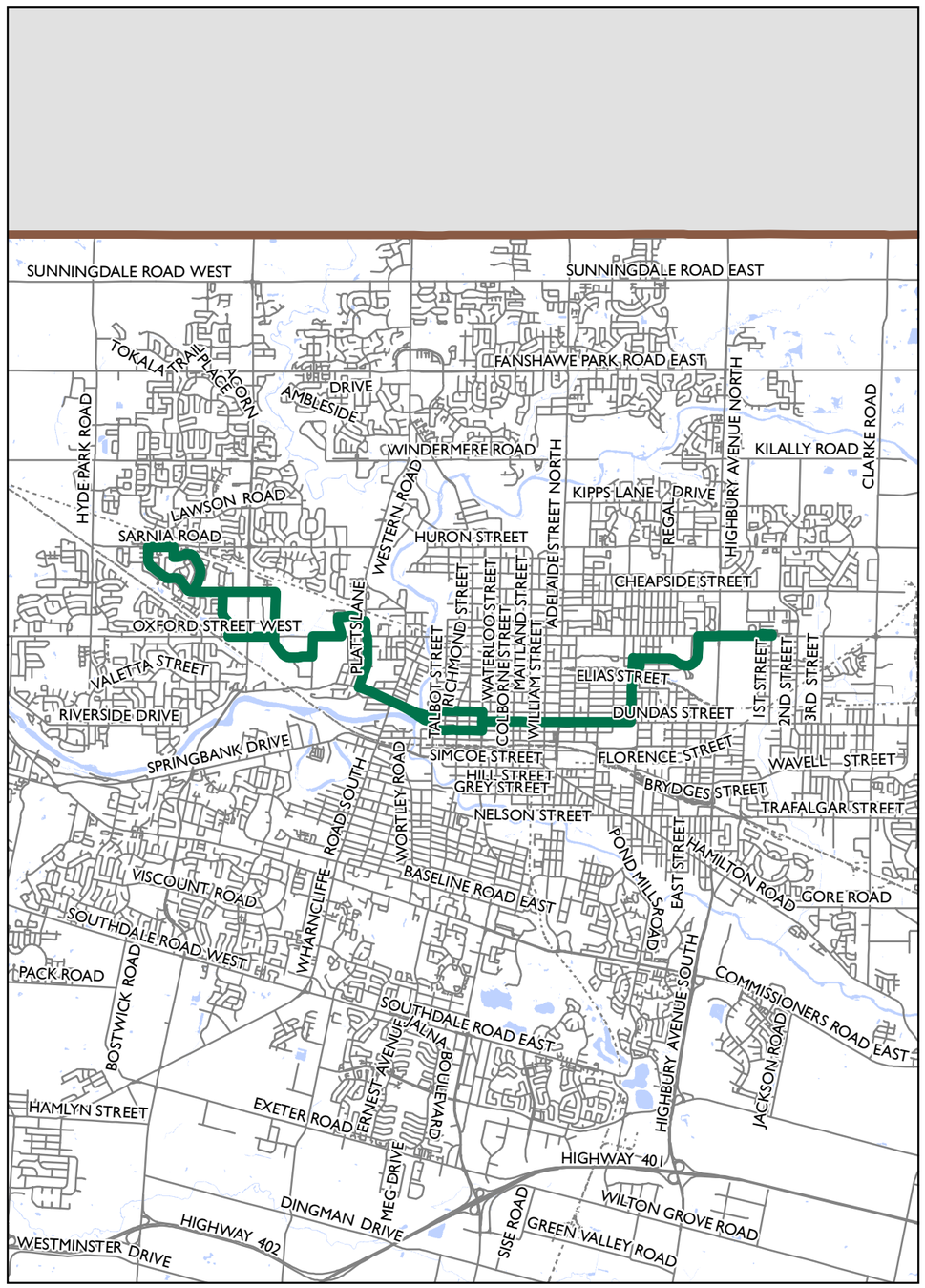
FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 188035
STATUS: FINAL
DATE: 2019-02-20

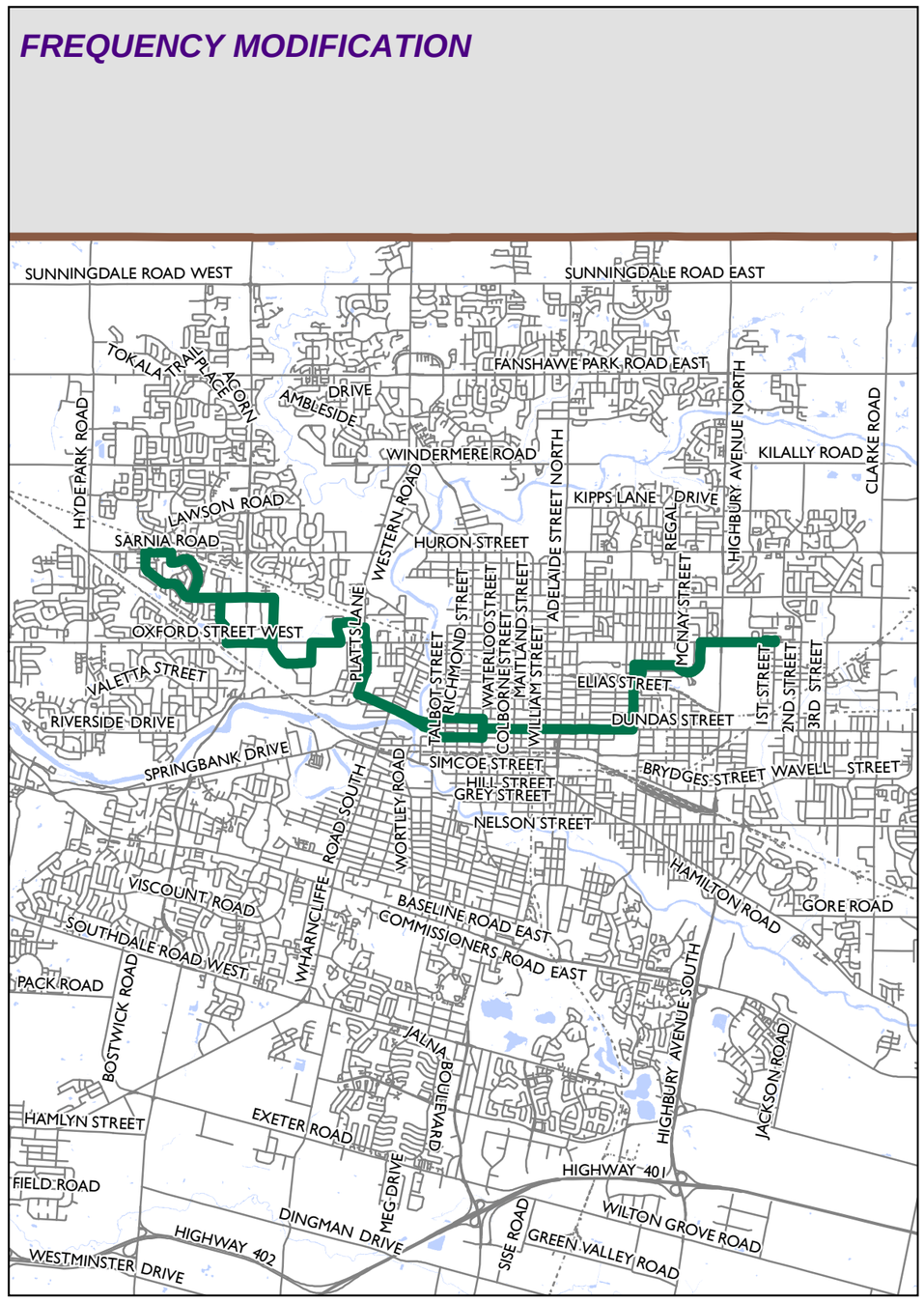
	WEEKDAY						SATURDAY					SUNDAY		
	EARLY AM	AM PEAK	BASE	PM PEAK	EARLY EVE	LATE EVE	EARLY AM	BASE	PEAK	EARLY EVE	LATE EVE	EARLY AM	DAY	EVENING
EXISTING 2019	33	28	27	30	35	47	0	47	32	52	47	47	50	48
PROPOSED 2024	33	28	27	30	35	30	0	30	32	30	30	30	30	30

PLANNED 2019 NETWORK



PROPOSED 2024 NETWORK

FREQUENCY MODIFICATION



london transit

LONDON TRANSIT COMMISSION

5-YEAR SERVICE PLAN

LONDON TRANSIT NETWORK
ROUTE NUMBER: 20

- Municipal Boundary
- Railway
- Waterbody

Route
20

0 0.5 1 km

MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

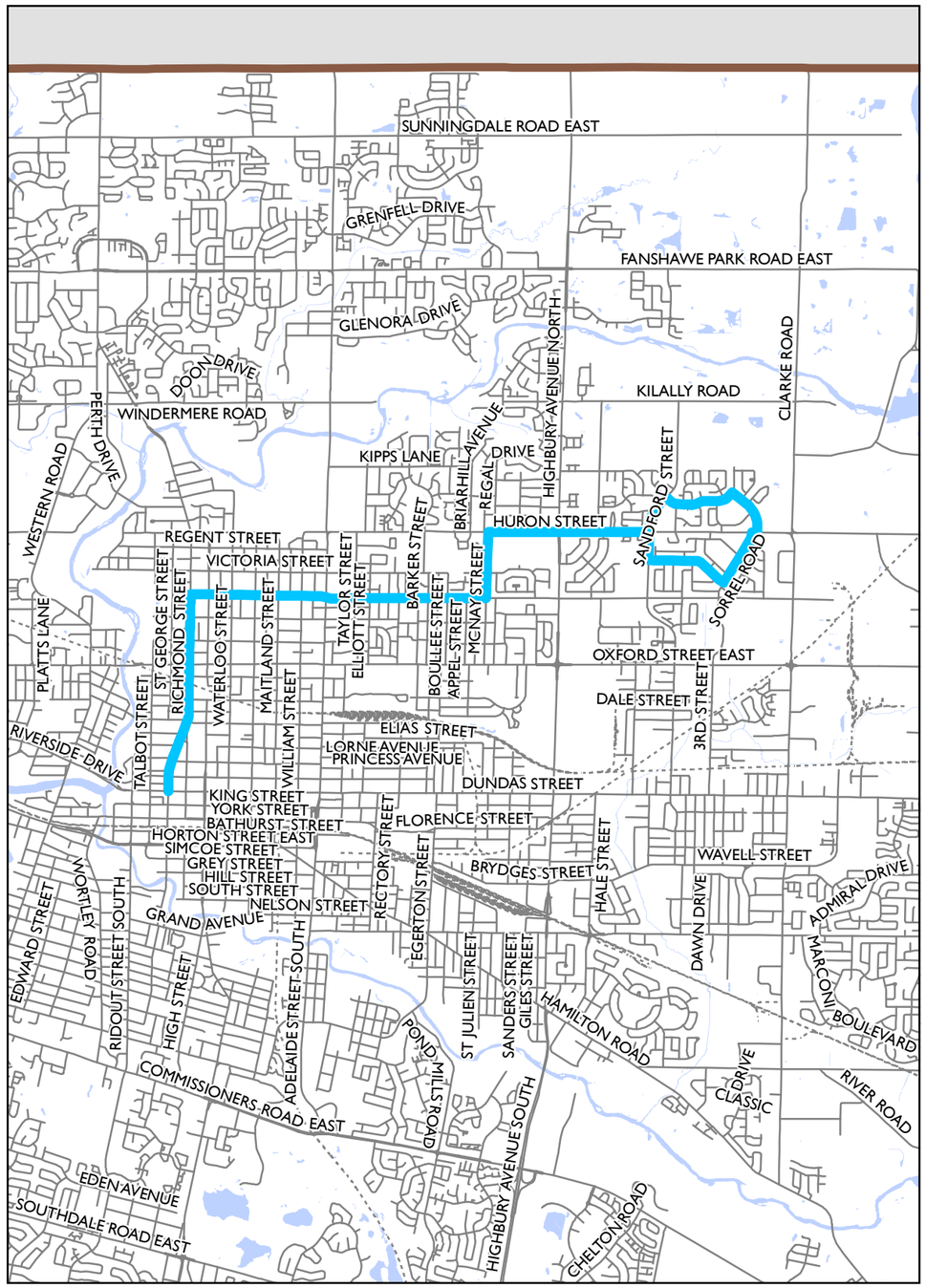
FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 188035
STATUS: FINAL
DATE: 2019-02-20

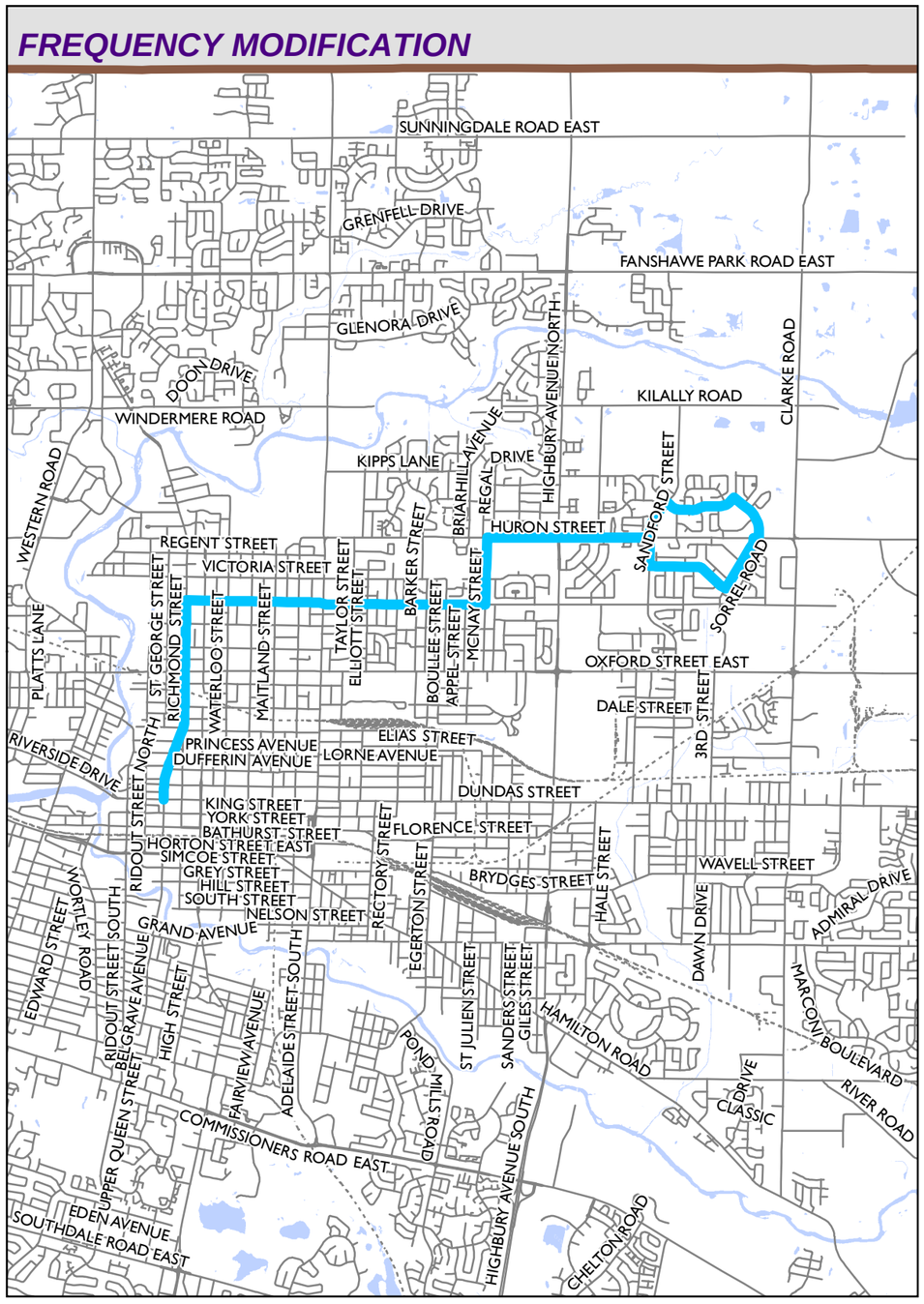
	WEEKDAY						SATURDAY					SUNDAY		
	EARLY AM	AM PEAK	BASE	PM PEAK	EARLY EVE	LATE EVE	EARLY AM	BASE	PEAK	EARLY EVE	LATE EVE	EARLY AM	DAY	EVENING
EXISTING 2019	30	15	20	15	20	30	45	30	20	30	30	30	30	30
PROPOSED 2024	30	15	20	15	20	30	30	30	20	30	30	30	20	30

PLANNED 2019 NETWORK



PROPOSED 2024 NETWORK

FREQUENCY MODIFICATION



LONDON TRANSIT COMMISSION

5-YEAR SERVICE PLAN

LONDON TRANSIT NETWORK
ROUTE NUMBER: 21

- Municipal Boundary
- Railway
- Waterbody

Route
21

0 0.5 1 km

MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

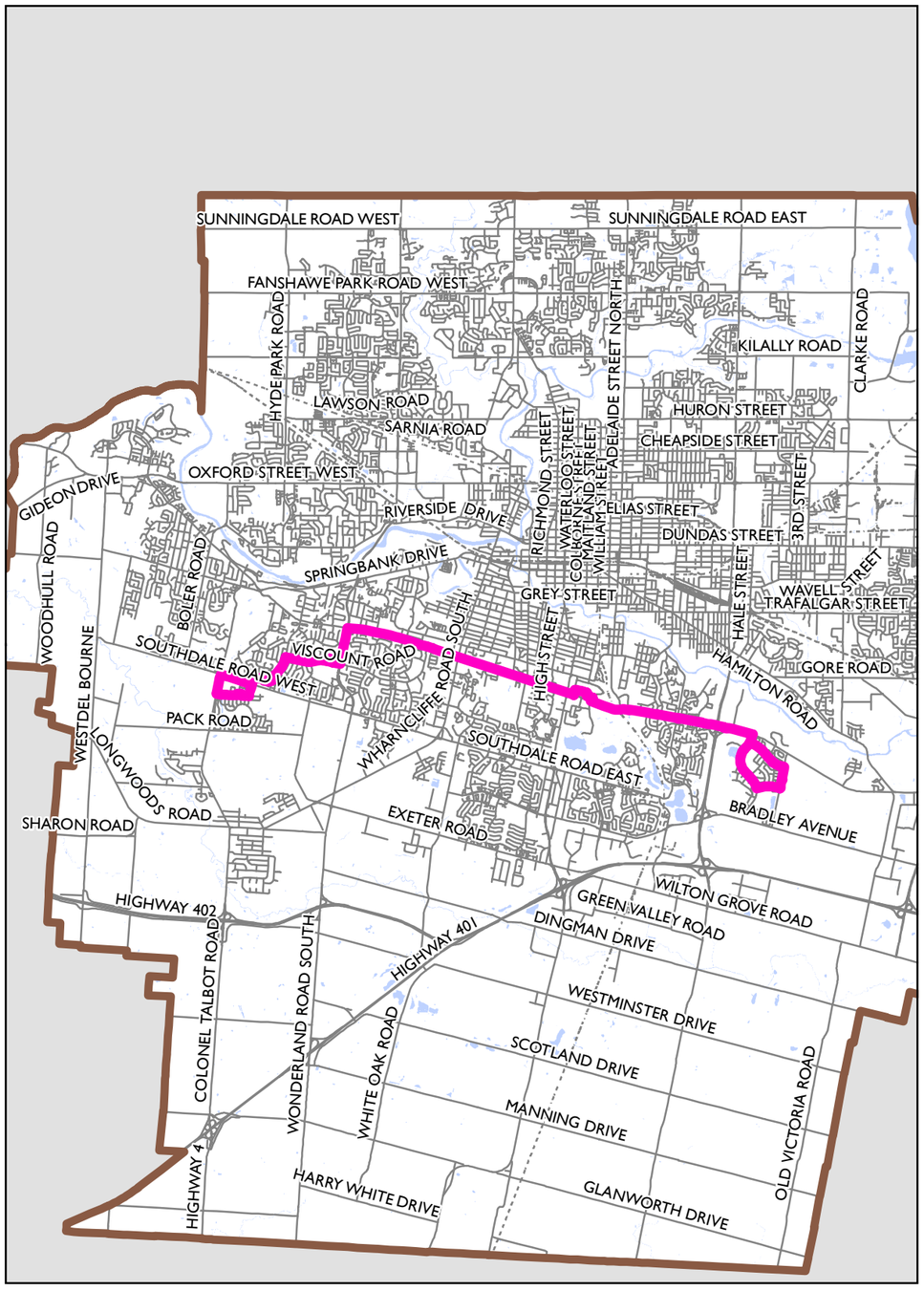
FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 188035
STATUS: FINAL
DATE: 2019-02-20

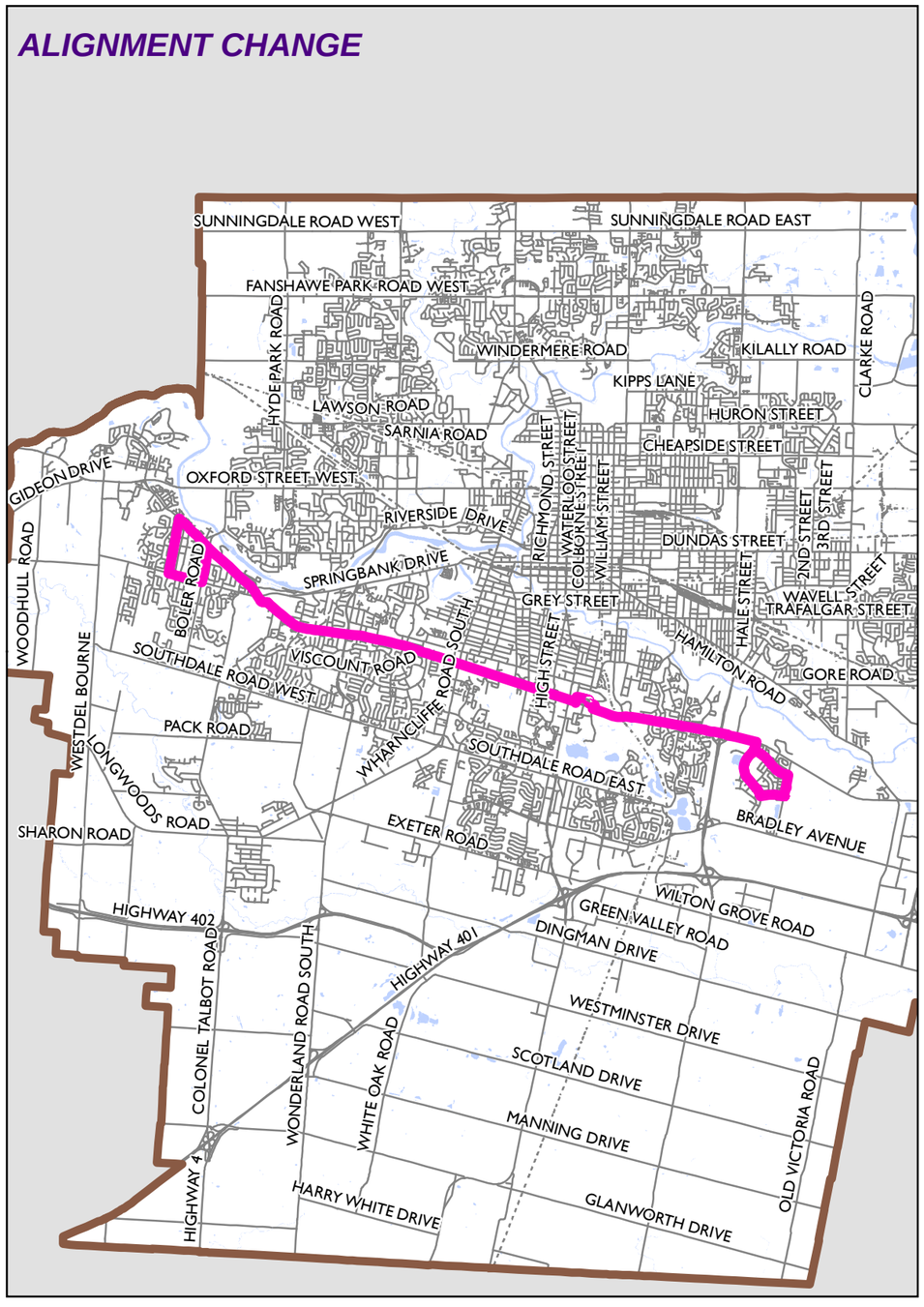
	WEEKDAY						SATURDAY					SUNDAY		
	EARLY AM	AM PEAK	BASE	PM PEAK	EARLY EVE	LATE EVE	EARLY AM	BASE	PEAK	EARLY EVE	LATE EVE	EARLY AM	DAY	EVENING
EXISTING 2019	20	16	15	15	30	30	30	30	20	30	30	30	30	30
PROPOSED 2024	20	16	15	15	30	30	30	30	20	30	30	30	20	30

PLANNED 2019 NETWORK



PROPOSED 2024 NETWORK

ALIGNMENT CHANGE



LONDON TRANSIT COMMISSION

5-YEAR SERVICE PLAN

LONDON TRANSIT NETWORK
ROUTE NUMBER: 24

- Municipal Boundary
- Railway
- Waterbody

Route
24

0 0.5 1 km

MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

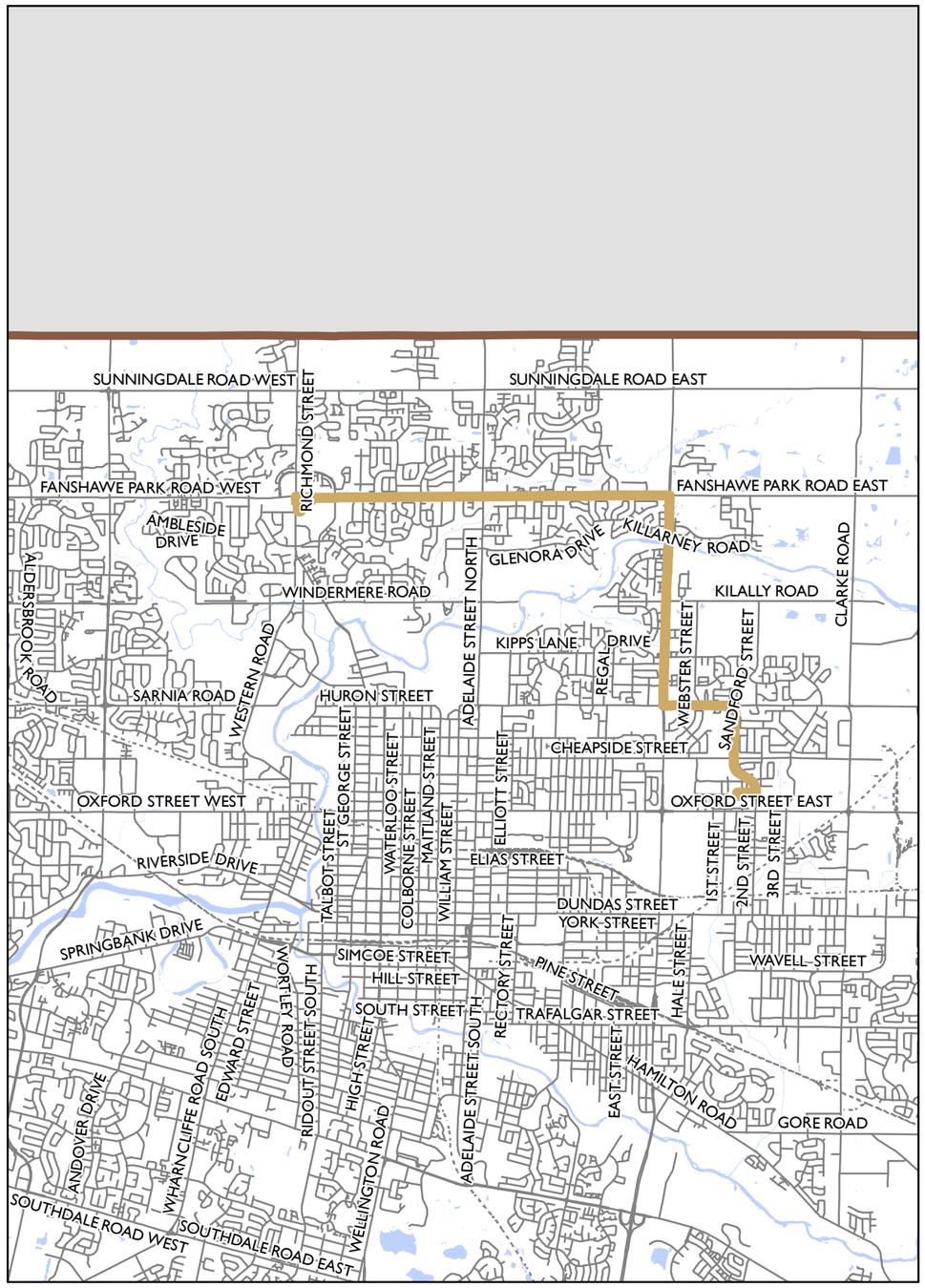
FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 188035
STATUS: FINAL
DATE: 2019-02-20

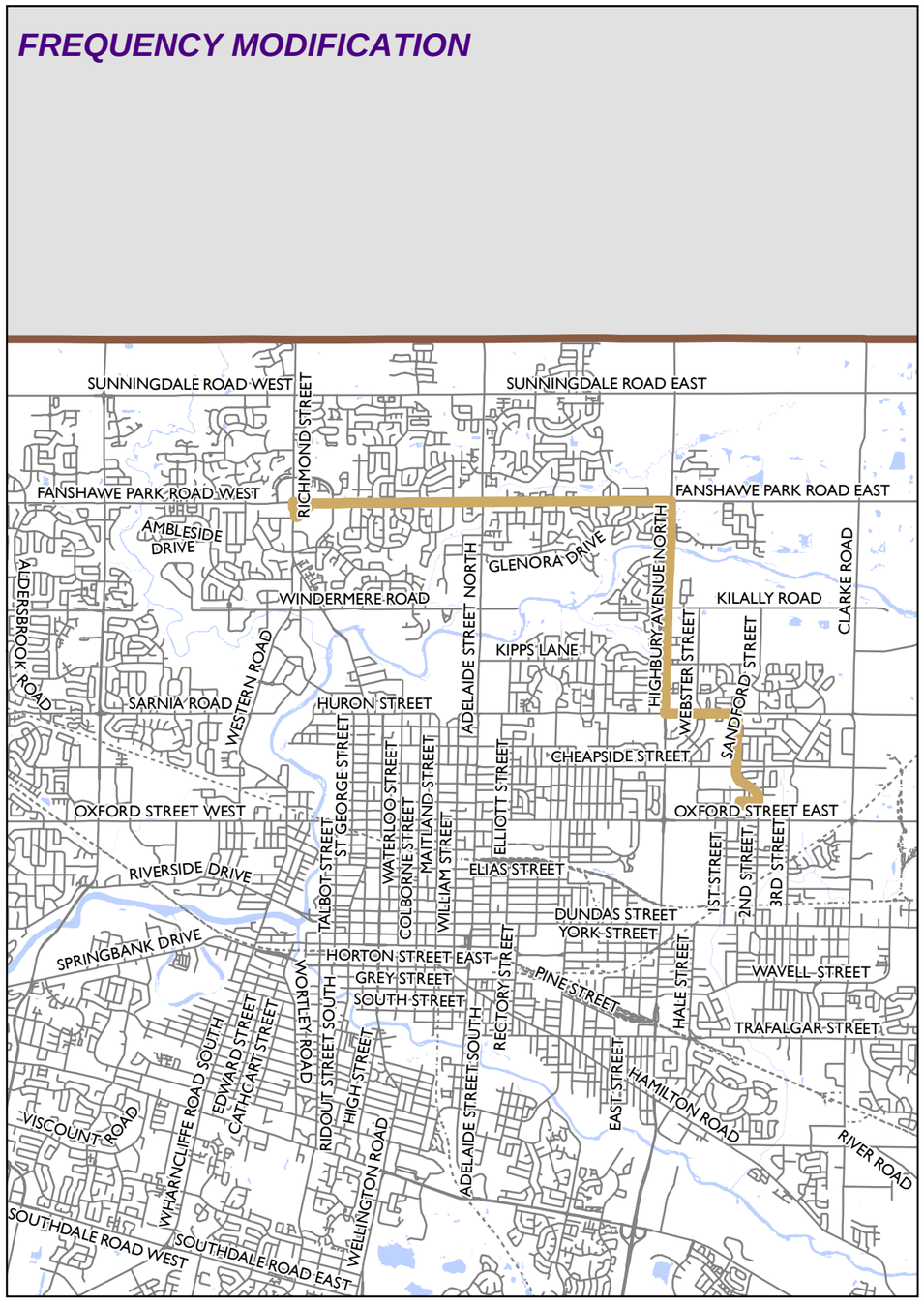
	WEEKDAY						SATURDAY					SUNDAY		
	EARLY AM	AM PEAK	BASE	PM PEAK	EARLY EVE	LATE EVE	EARLY AM	BASE	PEAK	EARLY EVE	LATE EVE	EARLY AM	DAY	EVENING
EXISTING 2019	40	40	40	40	40	0	0	40	40	0	0	35	40	0
PROPOSED 2024	40	40	40	40	40	0	0	40	40	0	0	35	40	0

PLANNED 2019 NETWORK



PROPOSED 2024 NETWORK

FREQUENCY MODIFICATION



LONDON TRANSIT COMMISSION

5-YEAR SERVICE PLAN

LONDON TRANSIT NETWORK
ROUTE NUMBER: 25

- Municipal Boundary
- Railway
- Waterbody

Route
25

0 0.5 1 km

MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

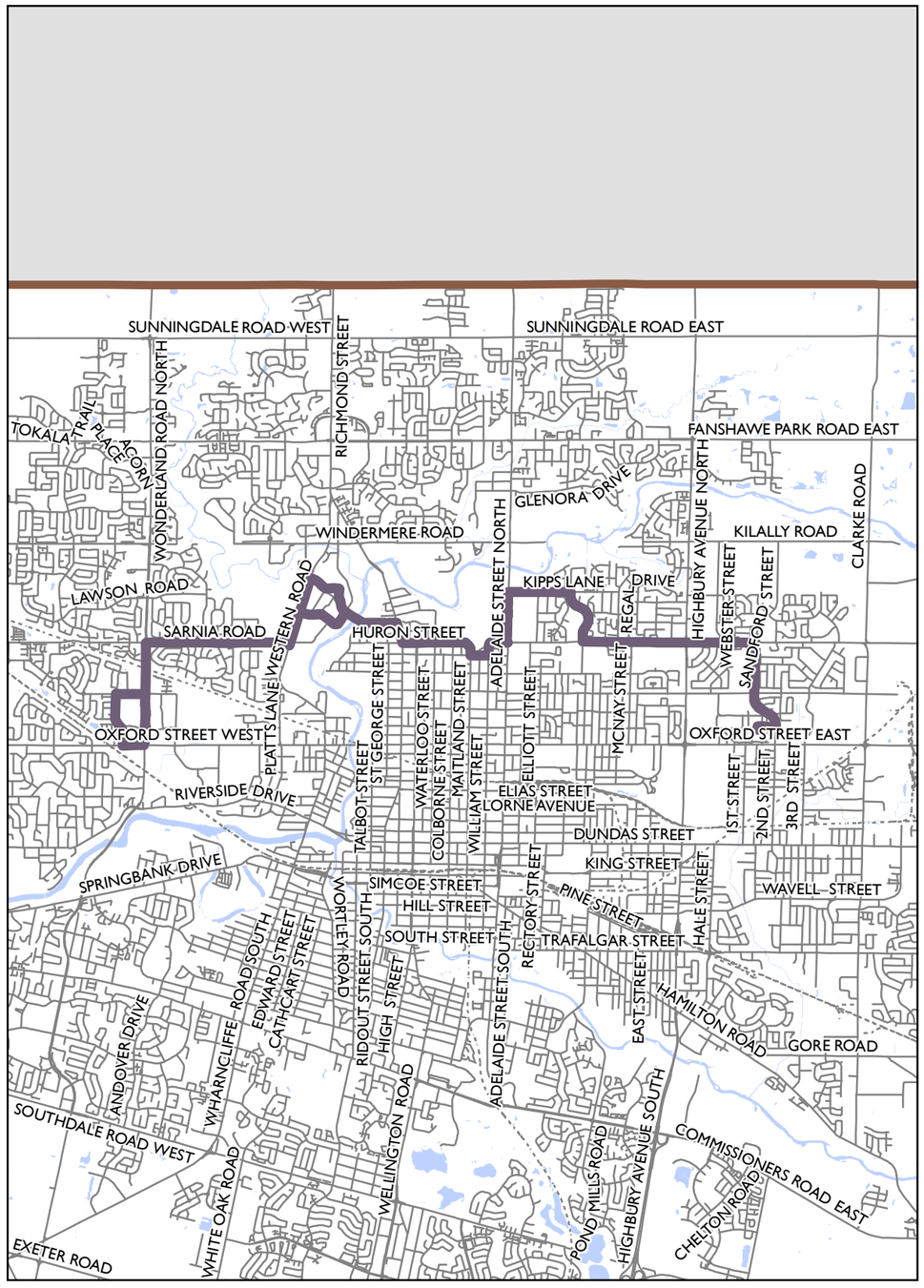
FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 188035
STATUS: FINAL
DATE: 2019-02-20

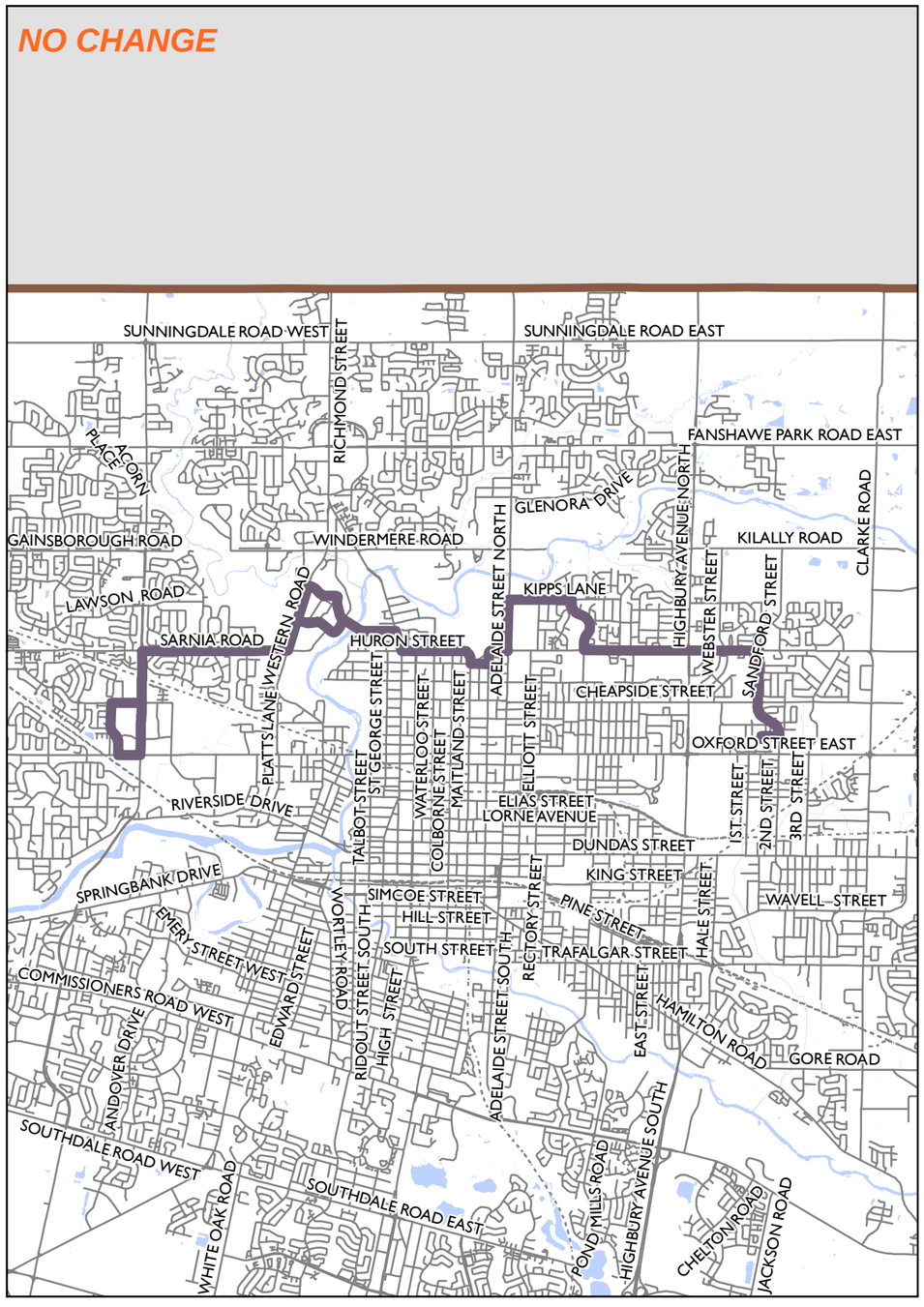
	WEEKDAY						SATURDAY					SUNDAY		
	EARLY AM	AM PEAK	BASE	PM PEAK	EARLY EVE	LATE EVE	EARLY AM	BASE	PEAK	EARLY EVE	LATE EVE	EARLY AM	DAY	EVENING
EXISTING 2019	30	55	30	20	60	60	60	60	30	60	60	60	27	60
PROPOSED 2024	30	55	30	20	30	30	30	30	30	30	30	30	30	30

PLANNED 2019 NETWORK



PROPOSED 2024 NETWORK

NO CHANGE



LONDON TRANSIT COMMISSION

5-YEAR SERVICE PLAN

LONDON TRANSIT NETWORK
ROUTE NUMBER: 27

- Municipal Boundary
- Railway
- Waterbody

Route
27

0 0.5 1 km

MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

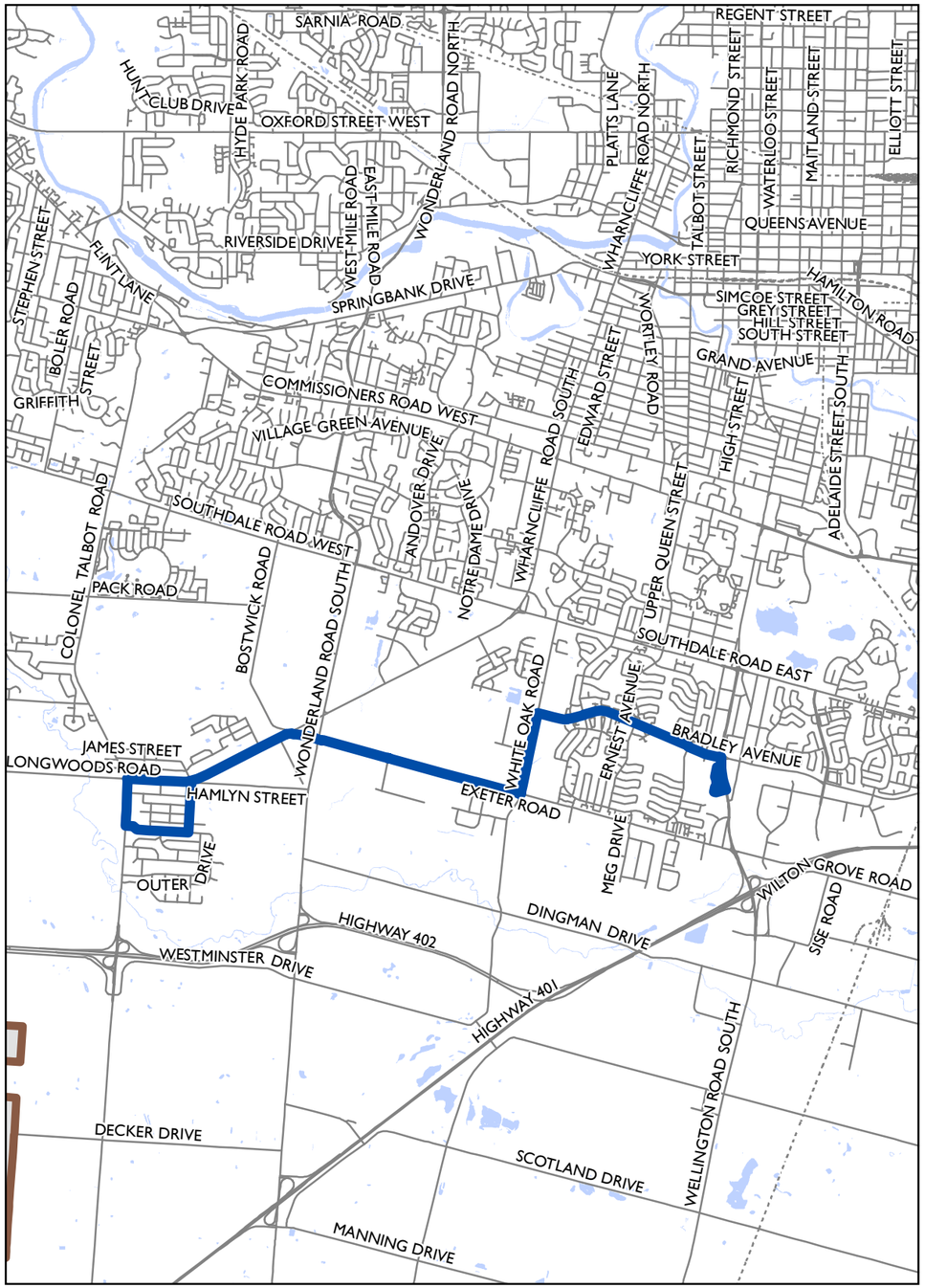
FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

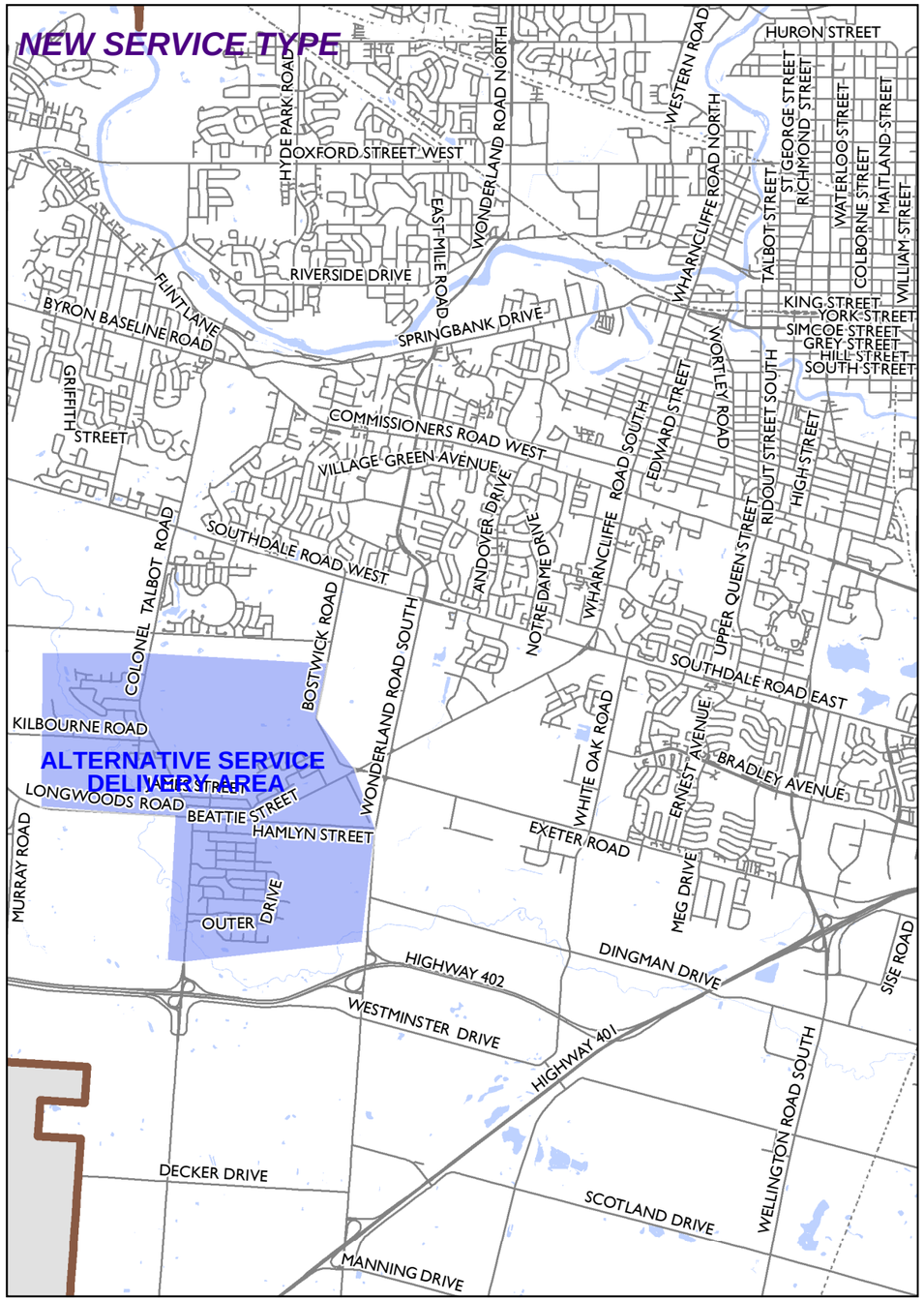
PROJECT: 188035
STATUS: FINAL
DATE: 2019-02-20

	WEEKDAY						SATURDAY					SUNDAY		
	EARLY AM	AM PEAK	BASE	PM PEAK	EARLY EVE	LATE EVE	EARLY AM	BASE	PEAK	EARLY EVE	LATE EVE	EARLY AM	DAY	EVENING
EXISTING 2019	40	13	13	11	17	27	43	47	25	28	40	43	32	28
PROPOSED 2024	40	13	13	11	17	27	43	47	25	28	40	43	32	28

PLANNED 2019 NETWORK



PROPOSED 2024 NETWORK



LONDON TRANSIT COMMISSION

5-YEAR SERVICE PLAN

LONDON TRANSIT NETWORK
ROUTE NUMBER: 28

- Municipal Boundary
- Railway
- Waterbody

Note: Alternative Service delivery will be considered based on route productivity after changes in 2019 have been assessed

Route
28

0 0.5 1 km

MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

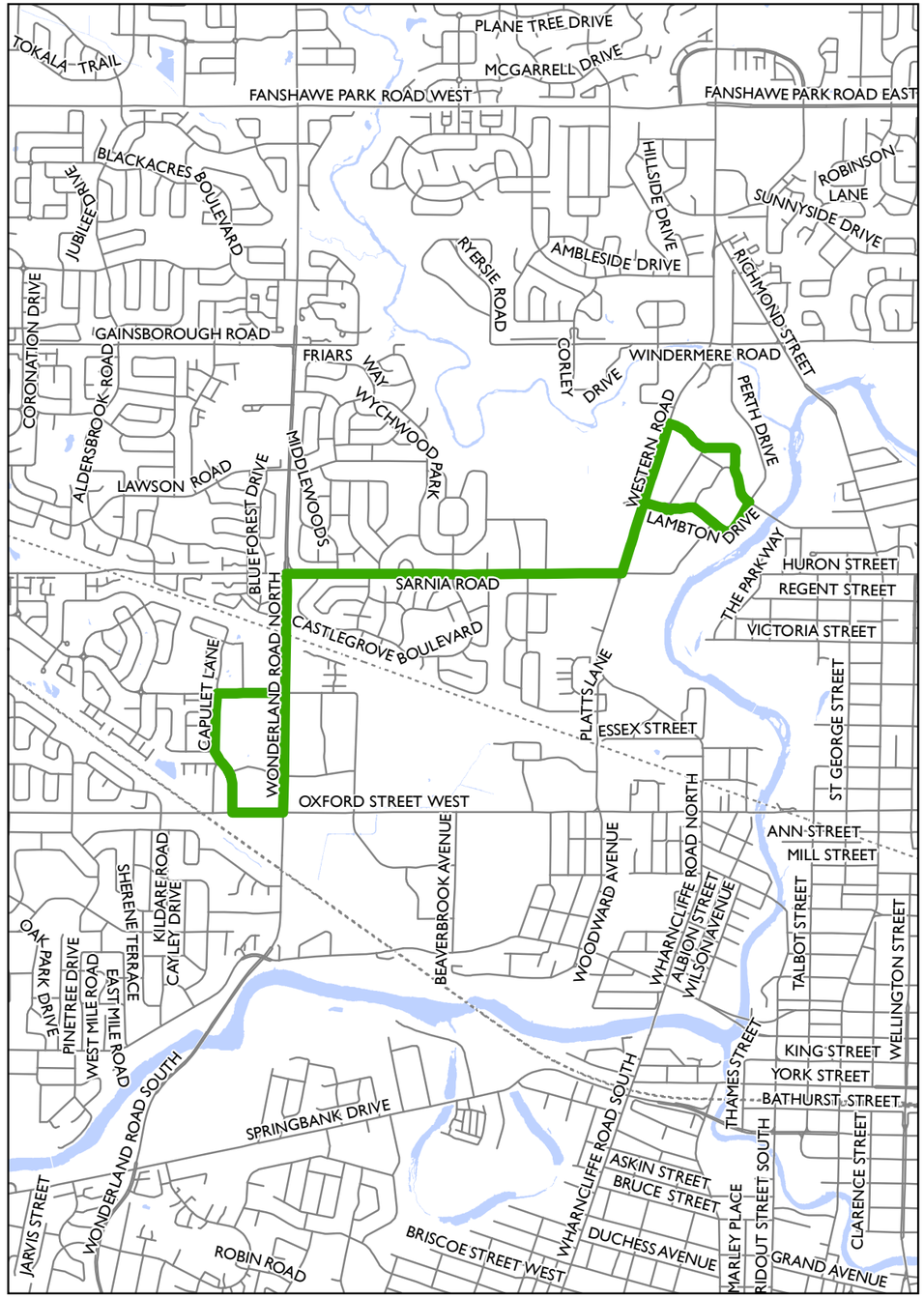
FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 188035
STATUS: FINAL
DATE: 2019-02-12

	WEEKDAY						SATURDAY					SUNDAY		
	EARLY AM	AM PEAK	BASE	PM PEAK	EARLY EVE	LATE EVE	EARLY AM	BASE	PEAK	EARLY EVE	LATE EVE	EARLY AM	DAY	EVENING
EXISTING 2019	0	40	0	40	0	0	0	0	0	0	0	0	0	0
PROPOSED 2024	0	ASD	ASD	ASD	0	0	0	0	0	0	0	0	0	0

PROPOSED NEW ROUTE 2024



LONDON TRANSIT COMMISSION

5-YEAR SERVICE PLAN

LONDON TRANSIT NETWORK
ROUTE NUMBER: 29 (**S**hort turn of **R**oute **27**)

Municipal Boundary
Railway
Waterbody

Route
29

0 0.5 1 km

MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

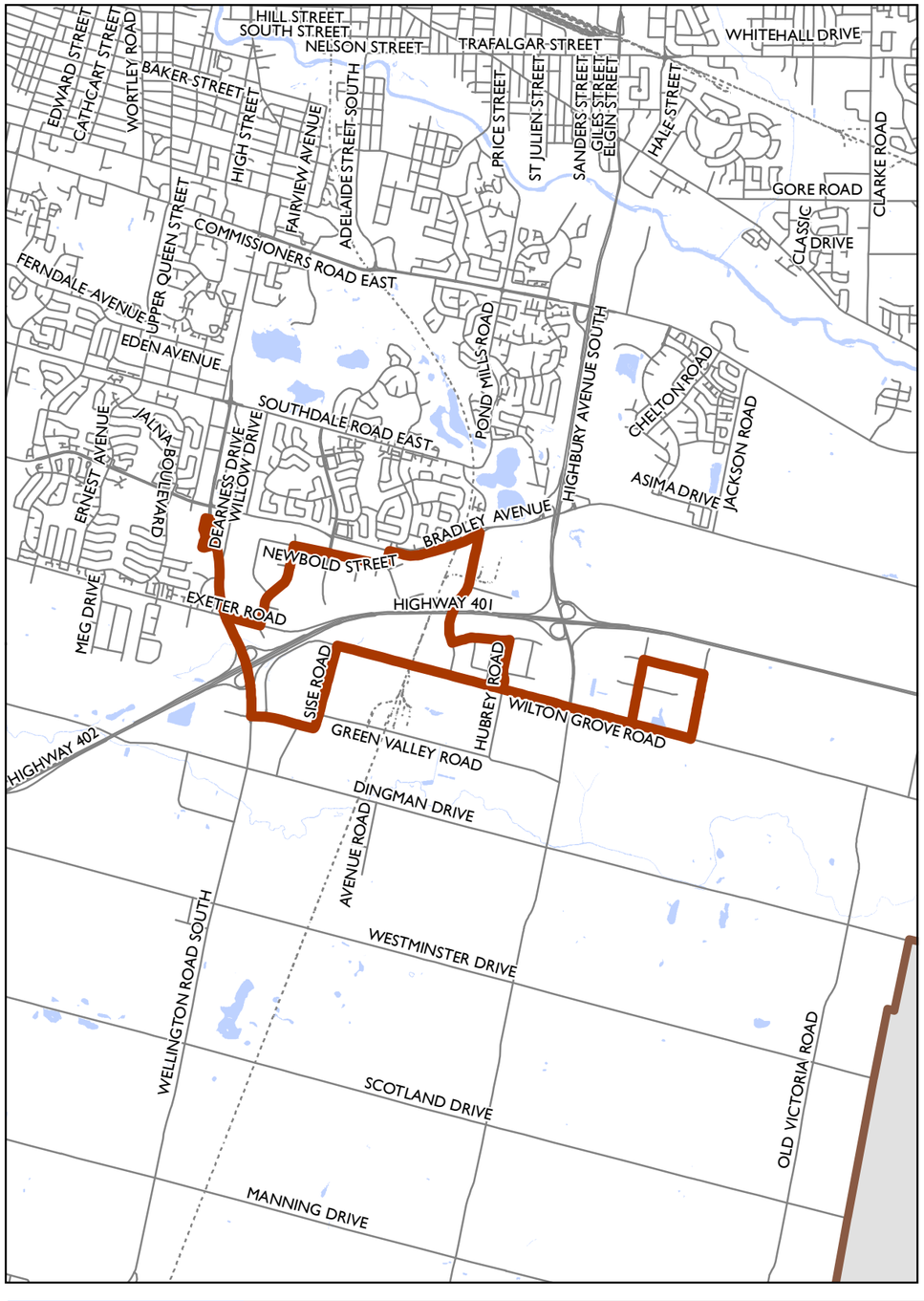
FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

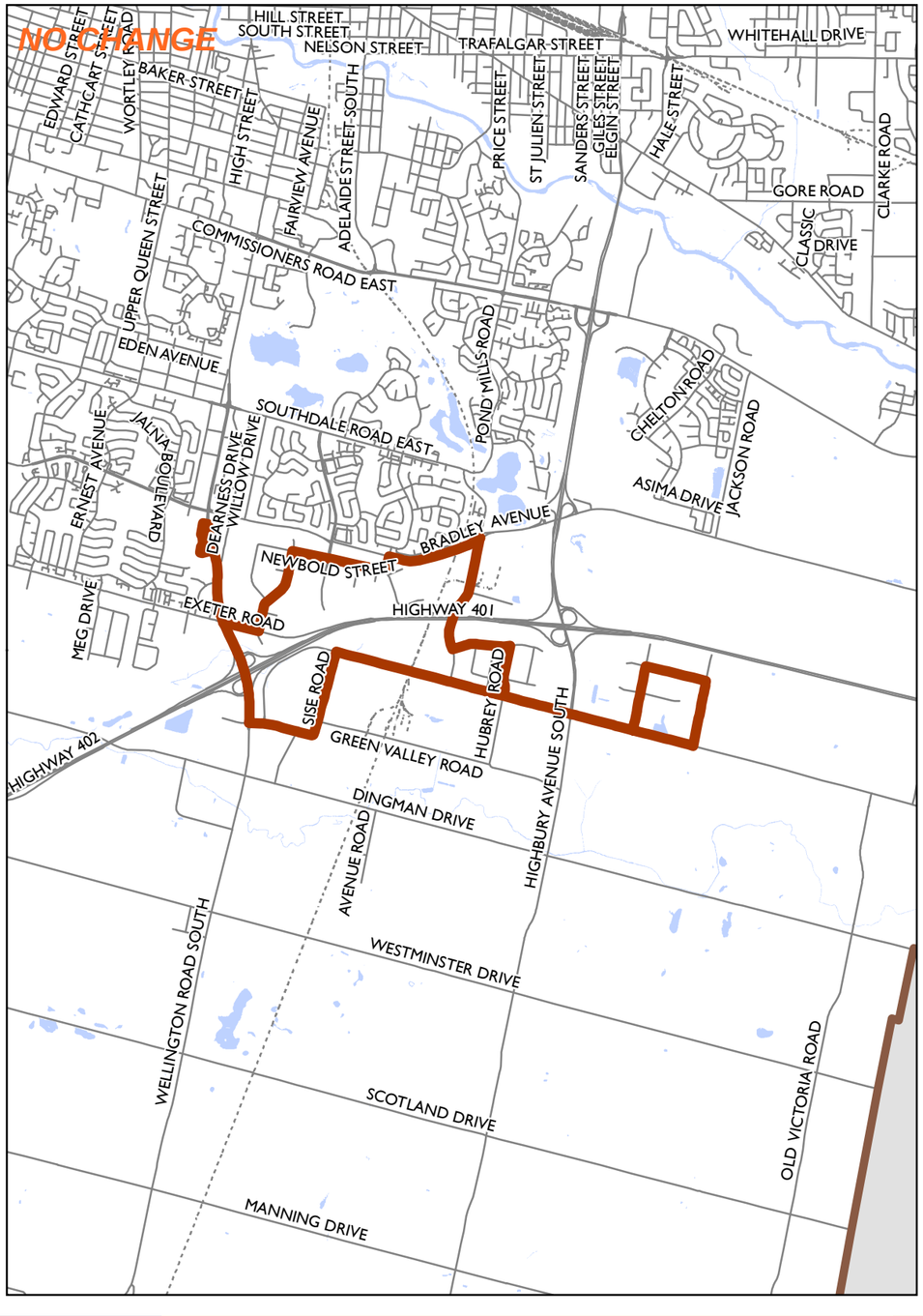
PROJECT: 188035
STATUS: FINAL
DATE: 2019-02-20

	WEEKDAY						SATURDAY					SUNDAY		
	EARLY AM	AM PEAK	BASE	PM PEAK	EARLY EVE	LATE EVE	EARLY AM	BASE	PEAK	EARLY EVE	LATE EVE	EARLY AM	DAY	EVENING
PROPOSED 2024	30	20	30	20	20	30	0	0	0	0	0	0	0	0

PLANNED 2019 NETWORK



PROPOSED 2024 NETWORK



LONDON TRANSIT COMMISSION

5-YEAR SERVICE PLAN

LONDON TRANSIT NETWORK
ROUTE NUMBER: 30

- Municipal Boundary
- Railway
- Waterbody

Route
30

0 0.5 1 km

MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

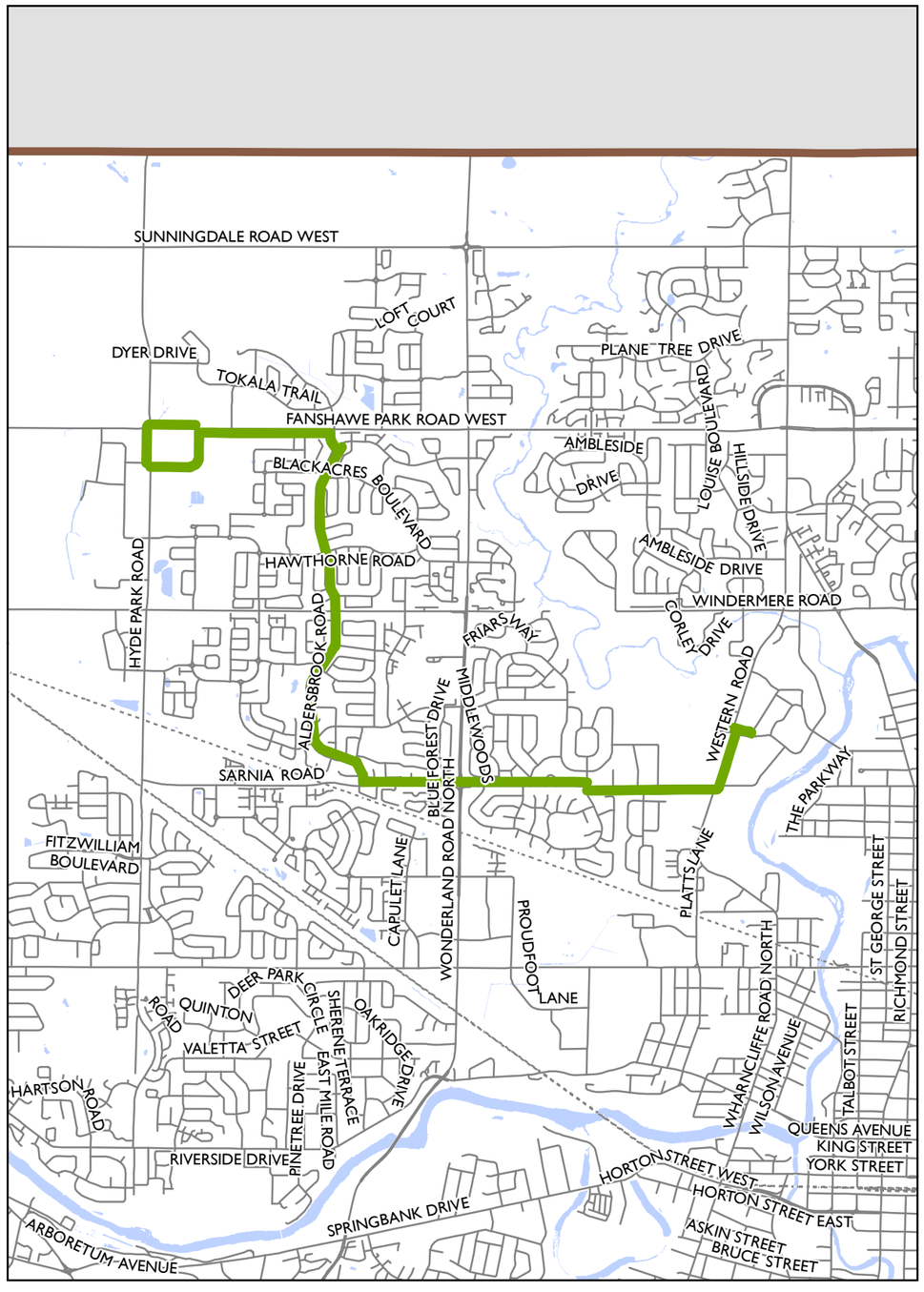
FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 188035
STATUS: FINAL
DATE: 2019-02-20

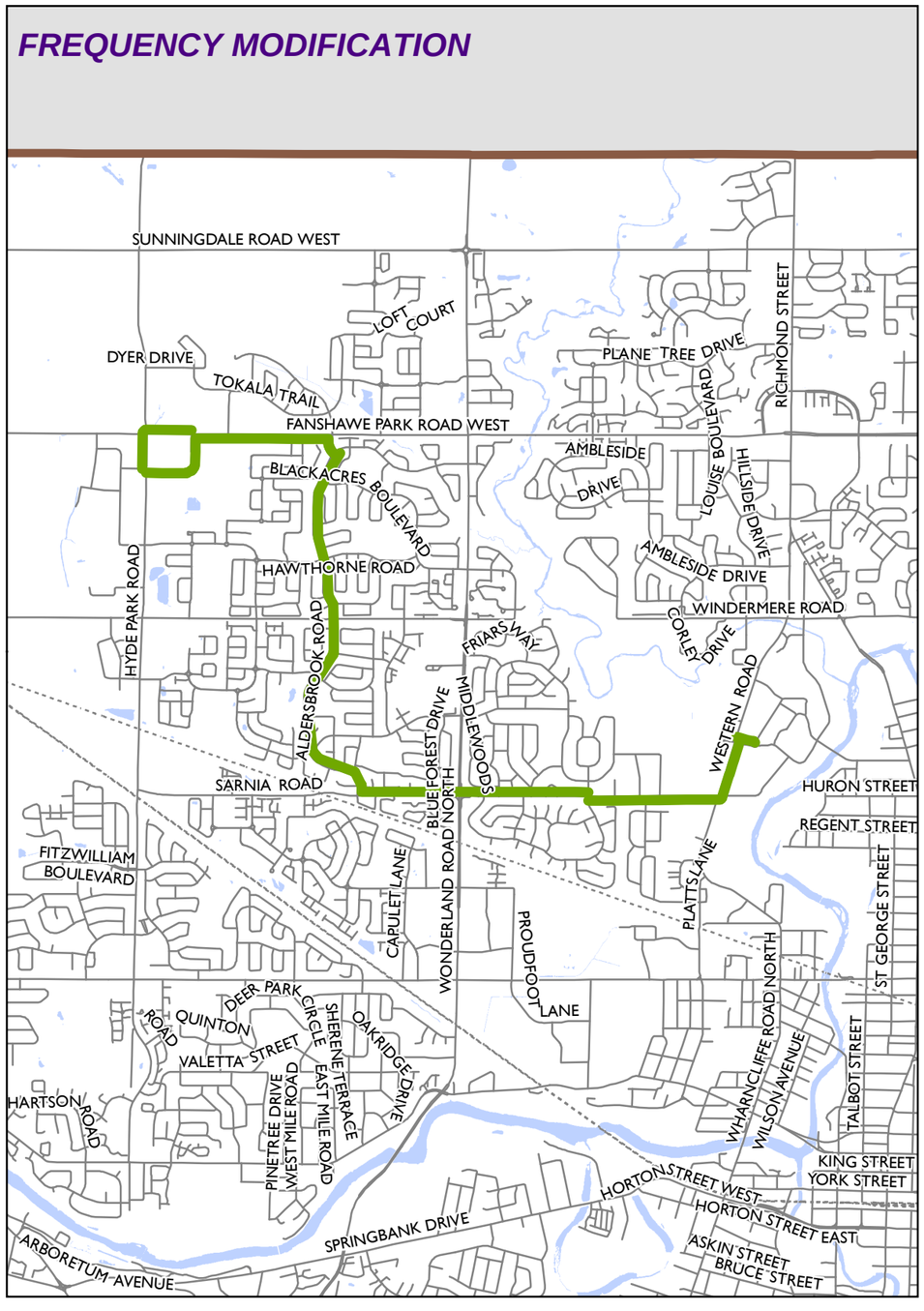
	WEEKDAY						SATURDAY					SUNDAY		
	EARLY AM	AM PEAK	BASE	PM PEAK	EARLY EVE	LATE EVE	EARLY AM	BASE	PEAK	EARLY EVE	LATE EVE	EARLY AM	DAY	EVENING
EXISTING 2019	40	40	0	40	0	40	0	0	0	0	0	0	0	0
PROPOSED 2024	40	40	0	40	0	40	0	0	0	0	0	0	0	0

PLANNED 2019 NETWORK



PROPOSED 2024 NETWORK

FREQUENCY MODIFICATION



LONDON TRANSIT COMMISSION

5-YEAR SERVICE PLAN

LONDON TRANSIT NETWORK
ROUTE NUMBER: 31

- Municipal Boundary
- Railway
- Waterbody

Route
31

0 0.5 1 km

MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

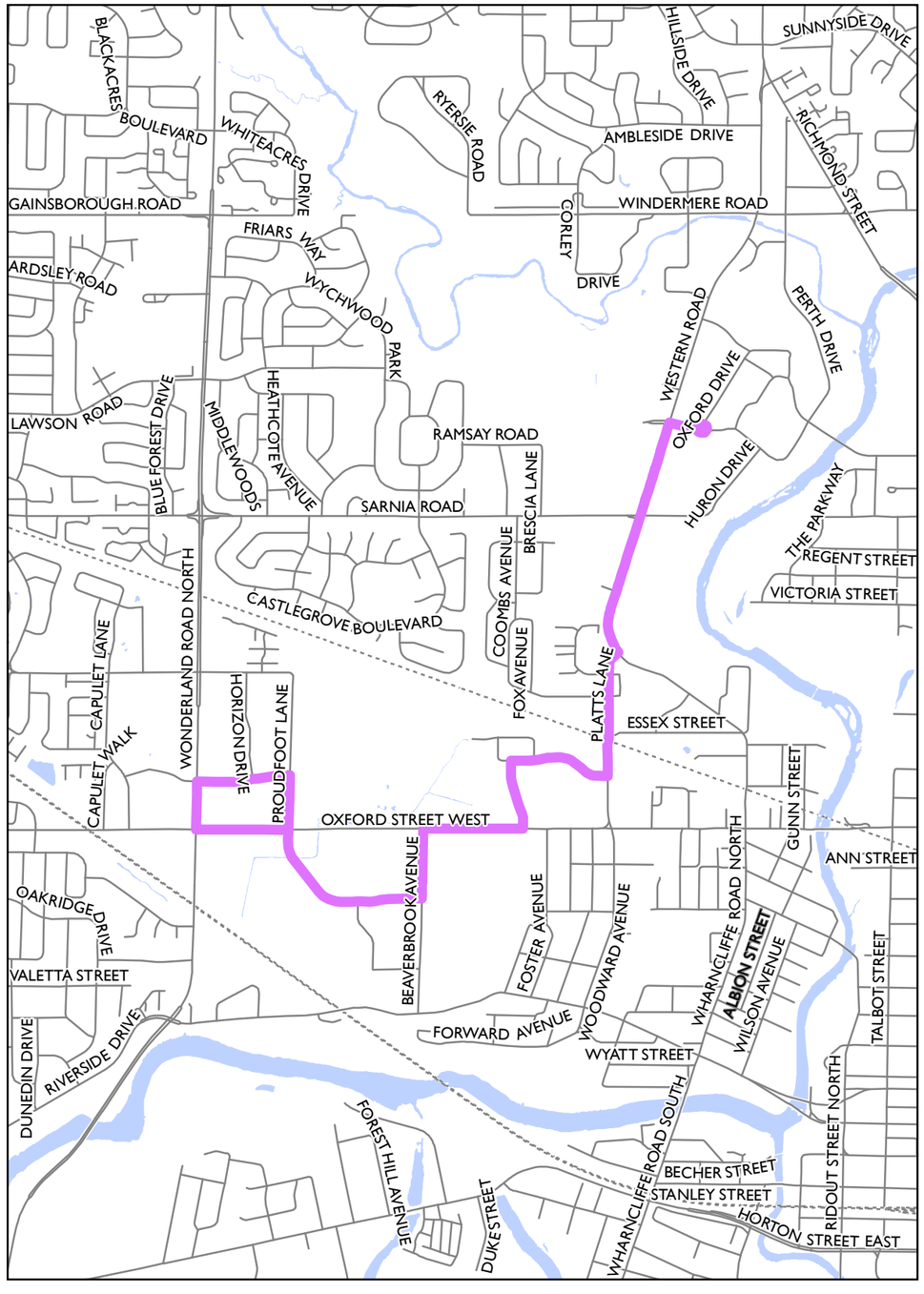
FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

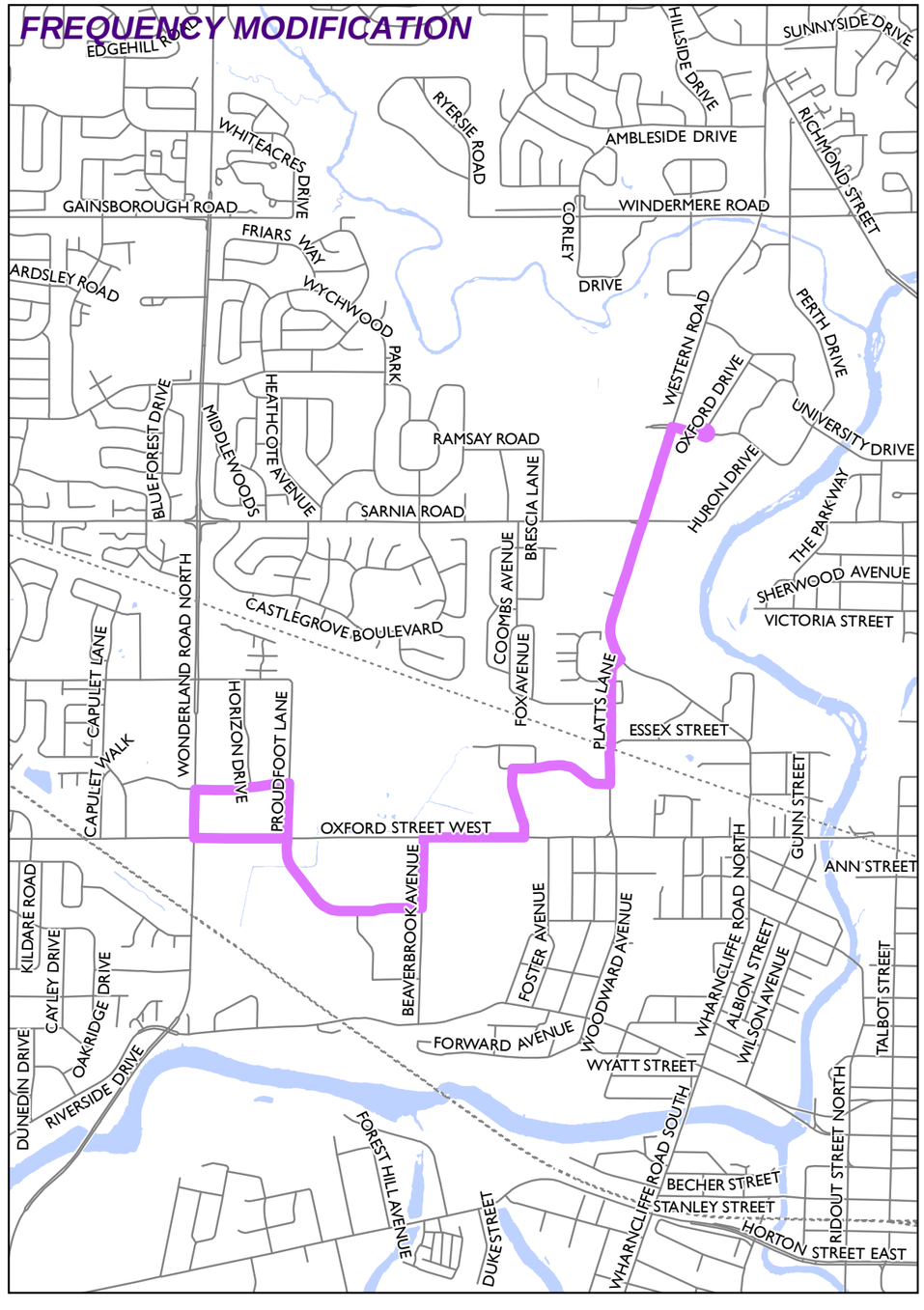
PROJECT: 188035
STATUS: FINAL
DATE: 2019-02-20

	WEEKDAY						SATURDAY					SUNDAY		
	EARLY AM	AM PEAK	BASE	PM PEAK	EARLY EVE	LATE EVE	EARLY AM	BASE	PEAK	EARLY EVE	LATE EVE	EARLY AM	DAY	EVENING
EXISTING 2019	48	28	27	30	55	48	50	25	27	52	48	50	50	0
PROPOSED 2024	20	20	20	20	30	30	30	25	27	30	30	30	30	0

PLANNED 2019 NETWORK



PROPOSED 2024 NETWORK



LONDON TRANSIT COMMISSION

5-YEAR SERVICE PLAN

LONDON TRANSIT NETWORK
ROUTE NUMBER: 33

- Municipal Boundary
- Railway
- Waterbody

Route
33

0 0.5 1 km

MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

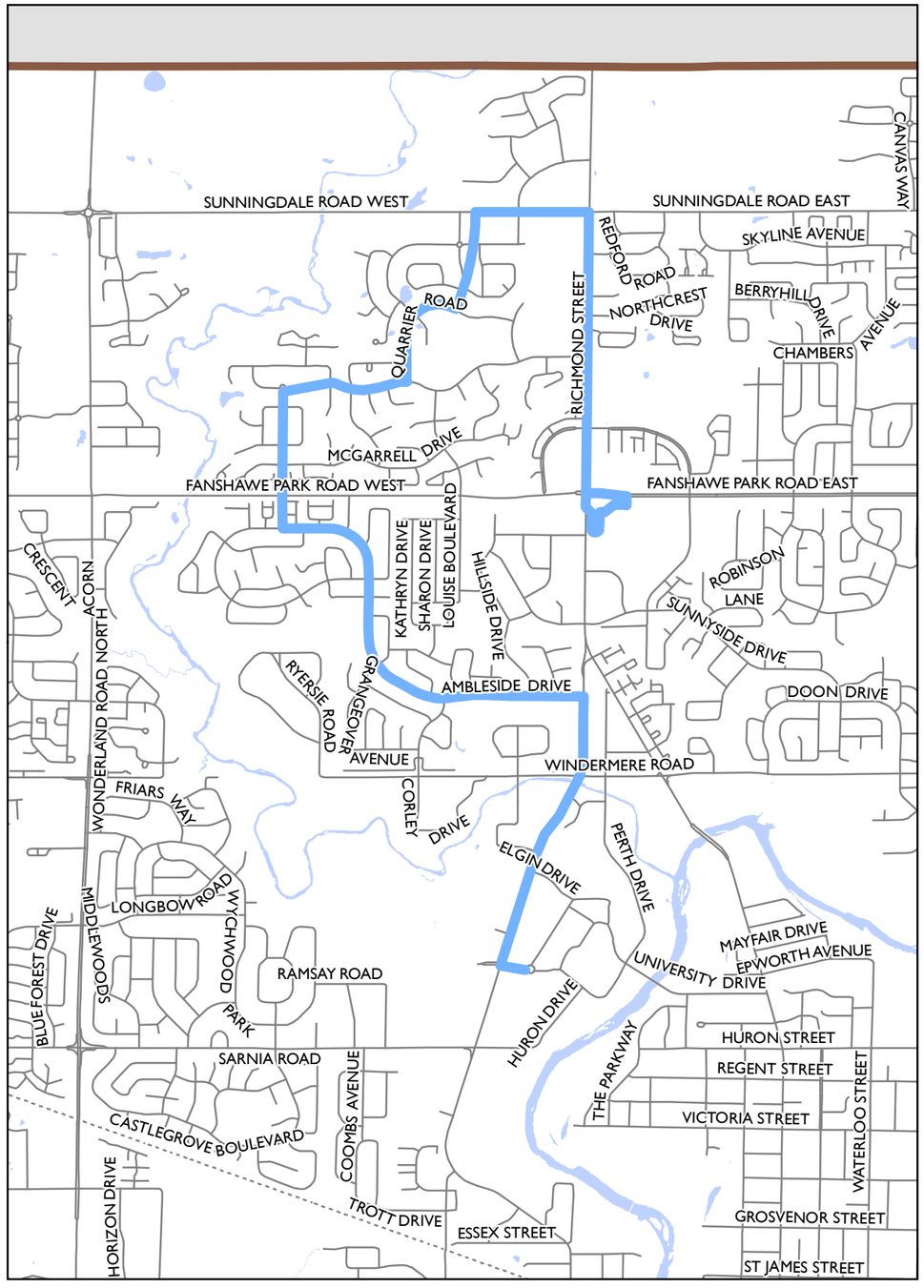
FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 188035
STATUS: FINAL
DATE: 2019-02-20

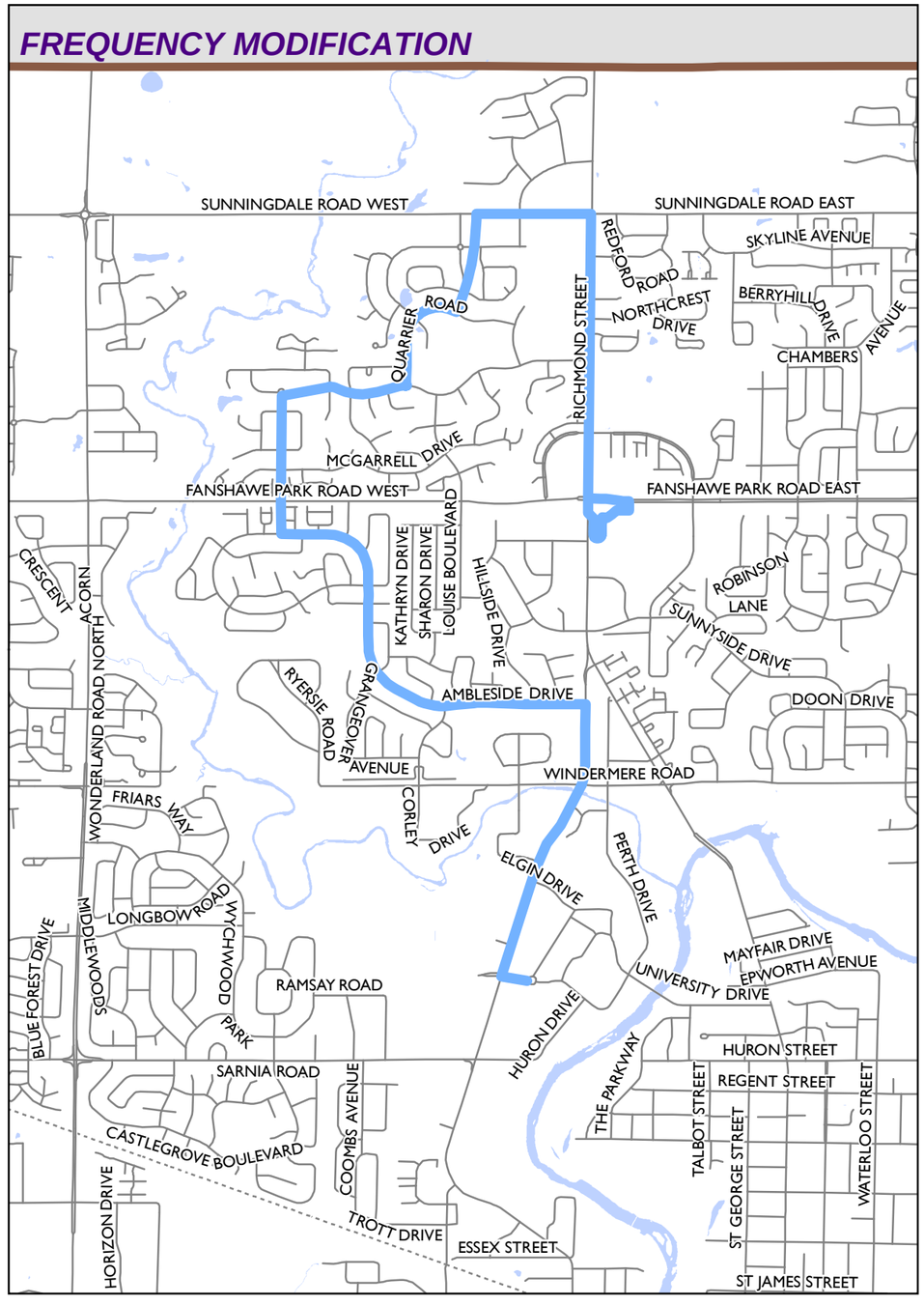
	WEEKDAY						SATURDAY					SUNDAY		
	EARLY AM	AM PEAK	BASE	PM PEAK	EARLY EVE	LATE EVE	EARLY AM	BASE	PEAK	EARLY EVE	LATE EVE	EARLY AM	DAY	EVENING
EXISTING 2019	0	13	13	15	17	0	0	0	0	0	0	0	0	0
PROPOSED 2024	0	13	10	15	17	0	0	0	0	0	0	0	0	0

PLANNED 2019 NETWORK



PROPOSED 2024 NETWORK

FREQUENCY MODIFICATION



LONDON TRANSIT COMMISSION

5-YEAR SERVICE PLAN

LONDON TRANSIT NETWORK
ROUTE NUMBER: 34

- Municipal Boundary
- Railway
- Waterbody

Route
34

0 0.5 1 km

MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

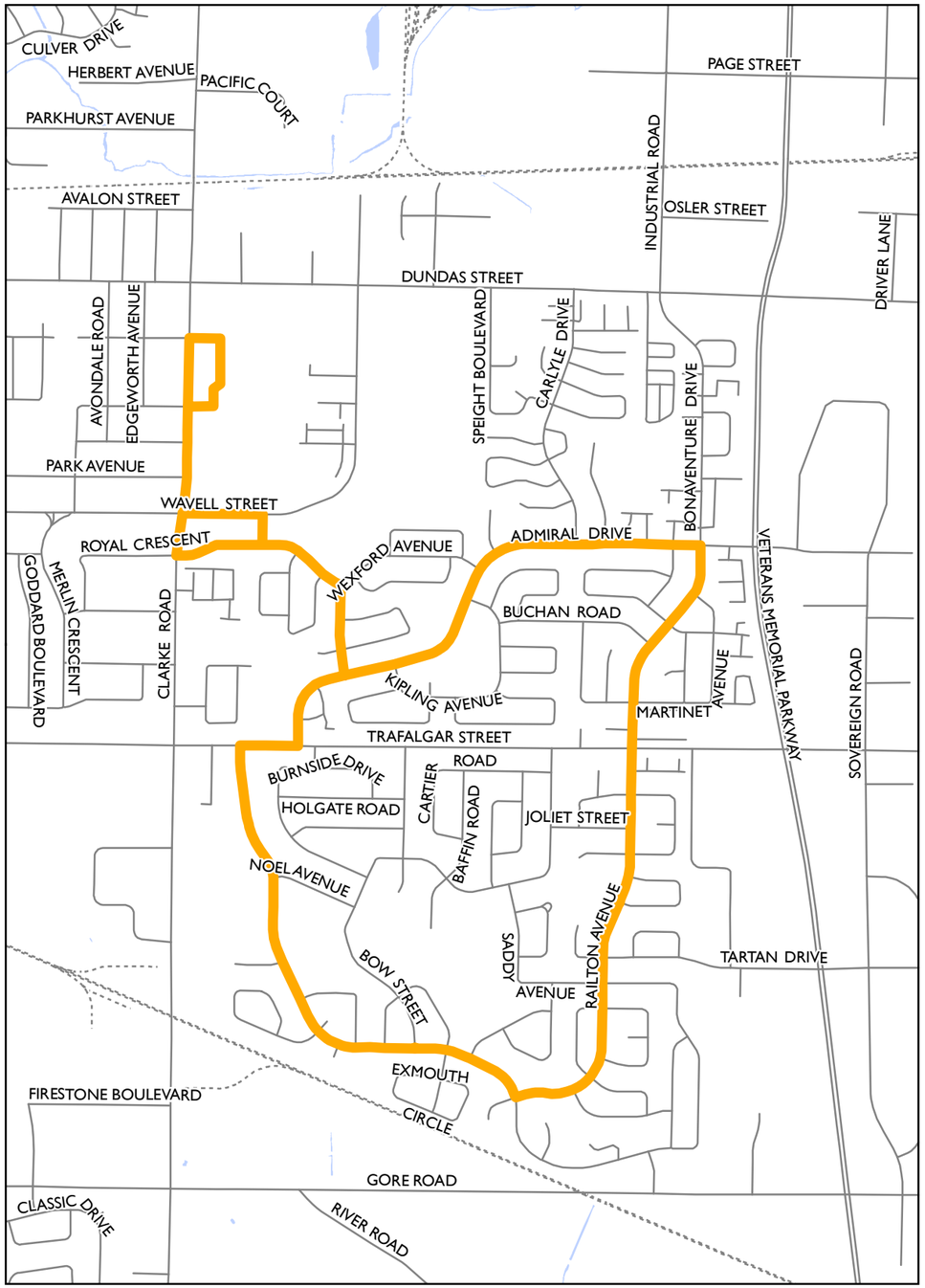
FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

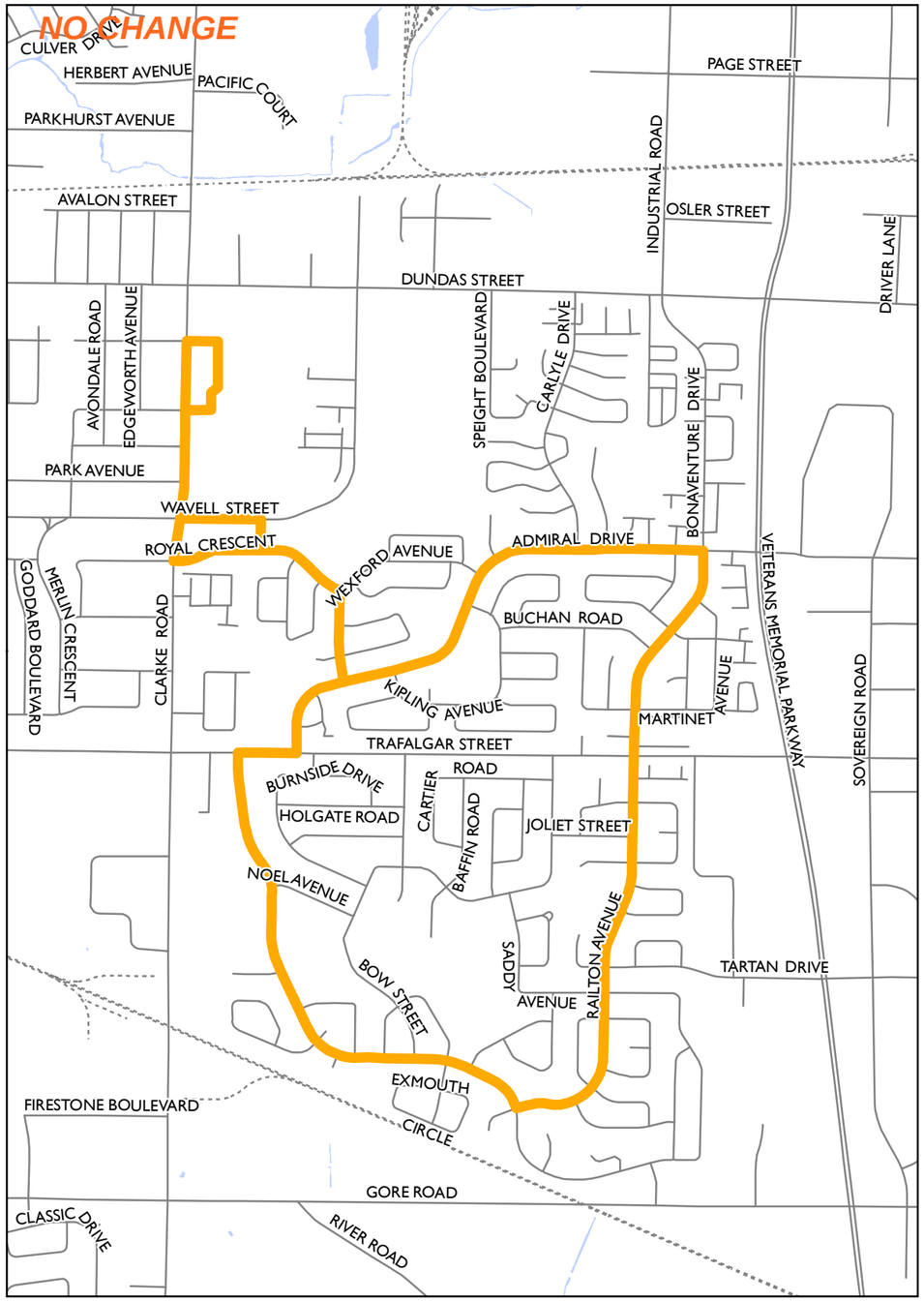
PROJECT: 188035
STATUS: FINAL
DATE: 2019-02-20

	WEEKDAY						SATURDAY					SUNDAY		
	EARLY AM	AM PEAK	BASE	PM PEAK	EARLY EVE	LATE EVE	EARLY AM	BASE	PEAK	EARLY EVE	LATE EVE	EARLY AM	DAY	EVENING
EXISTING 2019	30	30	60	45	60	60	30	30	40	60	60	60	40	60
PROPOSED 2024	30	30	30	30	30	30	30	30	30	30	30	30	30	30

PLANNED 2019 NETWORK



PROPOSED 2024 NETWORK



LONDON TRANSIT COMMISSION

5-YEAR SERVICE PLAN

LONDON TRANSIT NETWORK
ROUTE NUMBER: 35

- Municipal Boundary
- Railway
- Waterbody

Route
35

0 0.5 1 km

MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

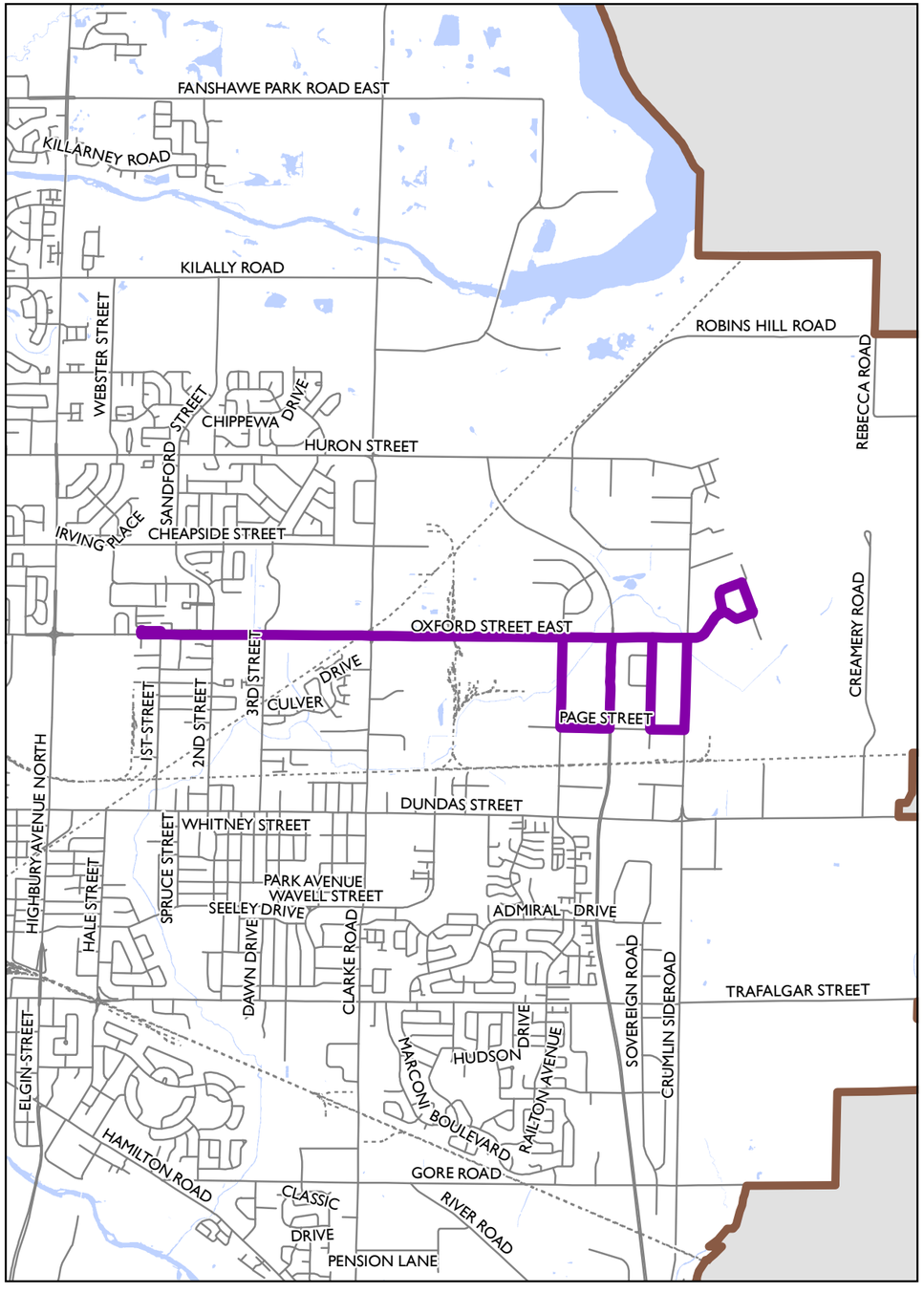
FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

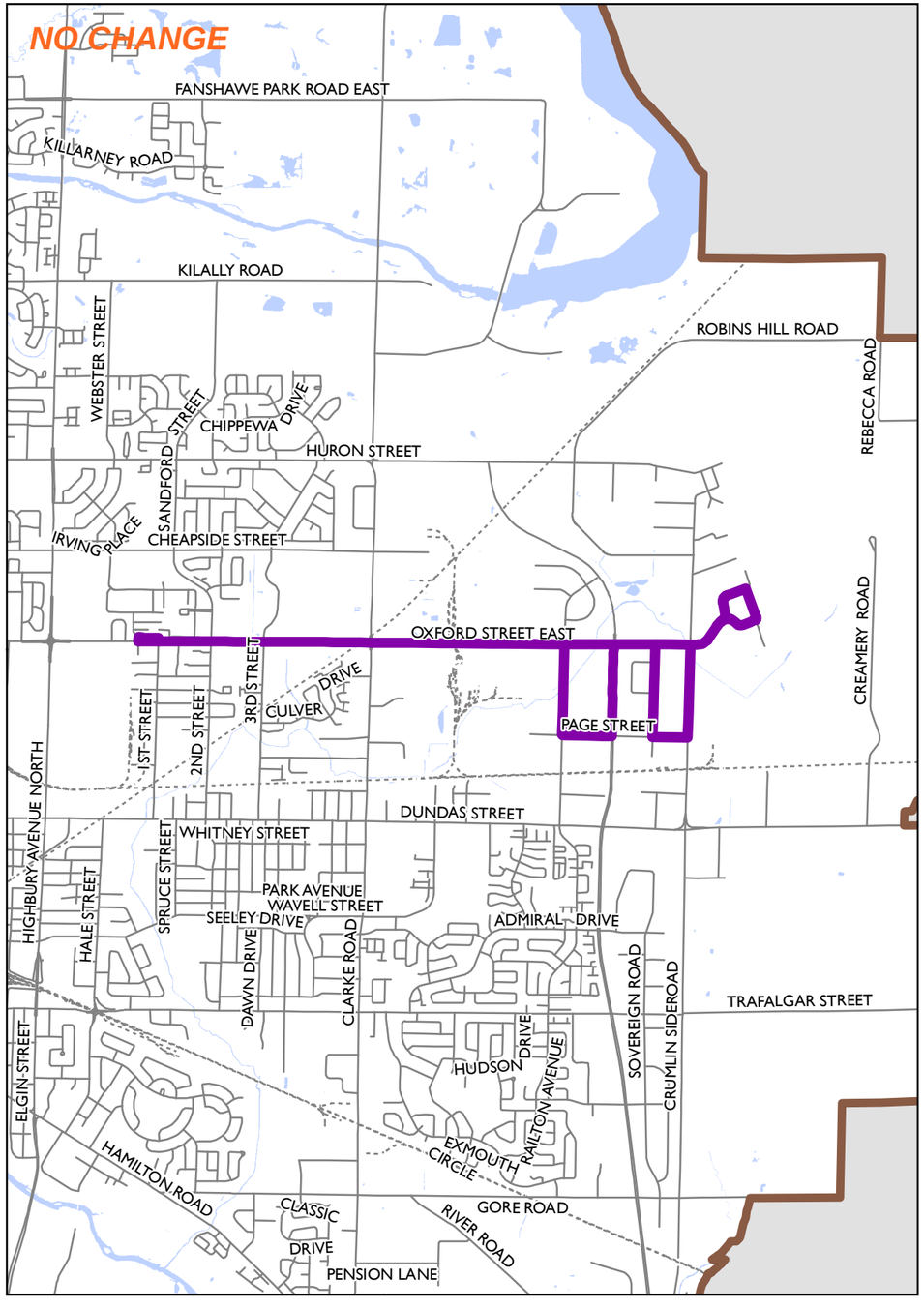
PROJECT: 188035
STATUS: FINAL
DATE: 2019-02-20

	WEEKDAY						SATURDAY					SUNDAY		
	EARLY AM	AM PEAK	BASE	PM PEAK	EARLY EVE	LATE EVE	EARLY AM	BASE	PEAK	EARLY EVE	LATE EVE	EARLY AM	DAY	EVENING
EXISTING 2019	30	30	30	30	30	0	30	30	30	30	0	30	30	0
PROPOSED 2024	30	30	30	30	30	0	30	30	30	30	0	30	30	0

PLANNED 2019 NETWORK



PROPOSED 2024 NETWORK



LONDON TRANSIT COMMISSION

5-YEAR SERVICE PLAN

LONDON TRANSIT NETWORK
ROUTE NUMBER: 36

- Municipal Boundary
- Railway
- Waterbody

Route
36

0 0.5 1 km

MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

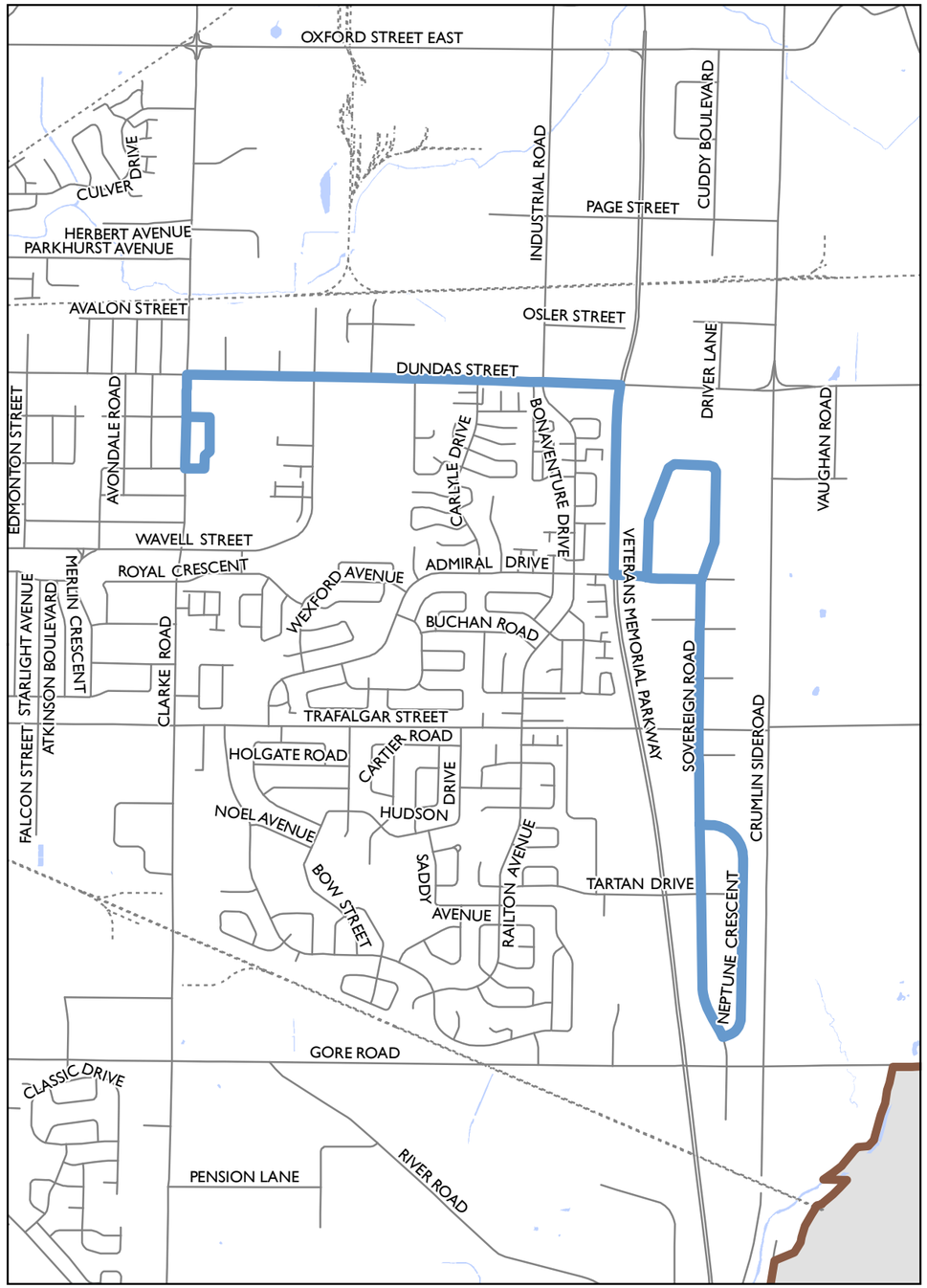
FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

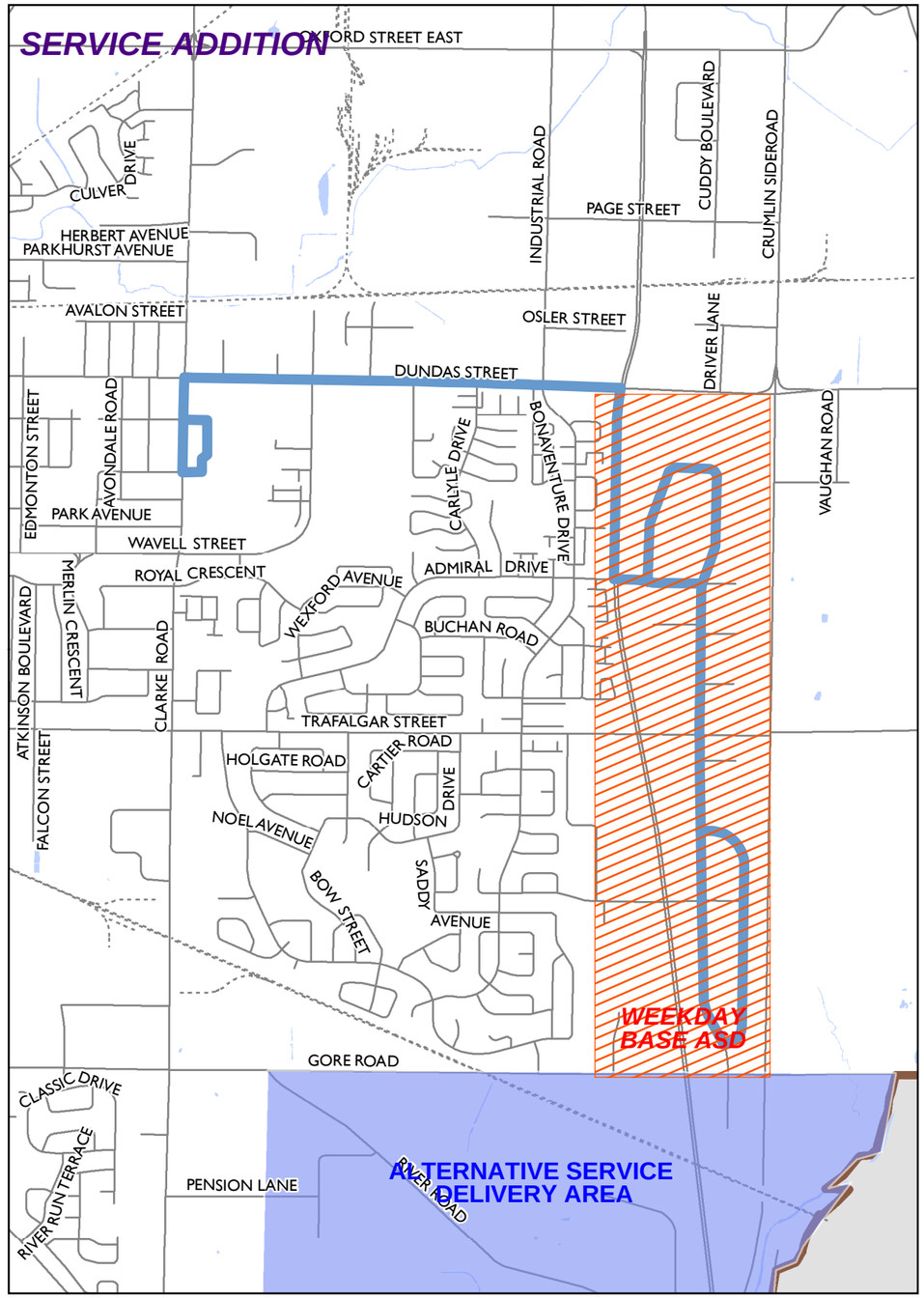
PROJECT: 188035
STATUS: FINAL
DATE: 2019-02-20

	WEEKDAY						SATURDAY					SUNDAY		
	EARLY AM	AM PEAK	BASE	PM PEAK	EARLY EVE	LATE EVE	EARLY AM	BASE	PEAK	EARLY EVE	LATE EVE	EARLY AM	DAY	EVENING
EXISTING 2019	30	30	30	30	0	30	0	0	0	0	0	0	0	0
PROPOSED 2024	30	30	30	30	0	30	0	0	0	0	0	0	0	0

PLANNED 2019 NETWORK



PROPOSED 2024 NETWORK



LONDON TRANSIT COMMISSION

5-YEAR SERVICE PLAN

LONDON TRANSIT NETWORK
ROUTE NUMBER: 37

- Municipal Boundary
- Railway
- Waterbody

Route

- 37
- Alternative Service Delivery - Innovation Park

0 0.5 1 km

MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

FILE LOCATION: I:\GIS\163037

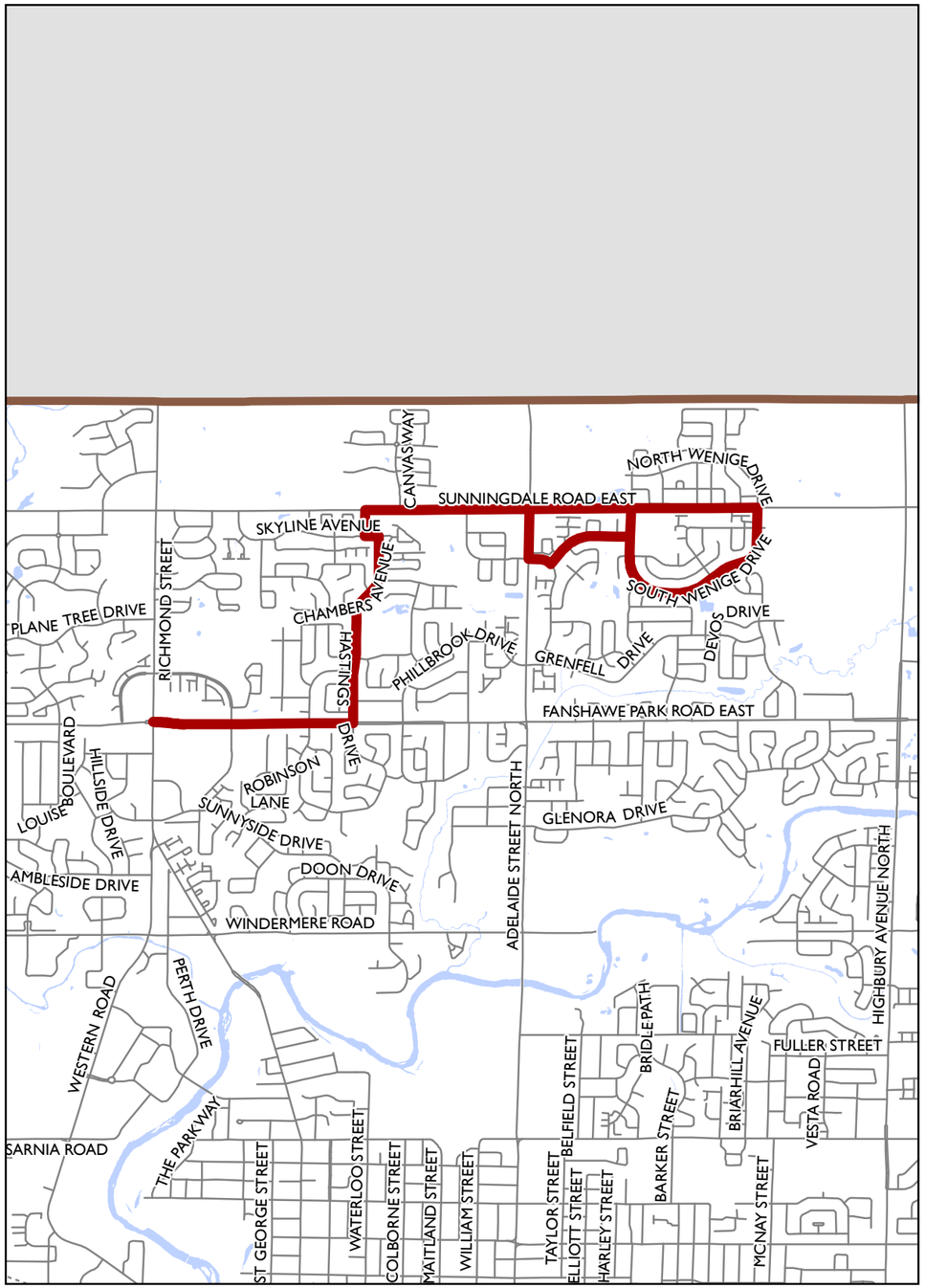
DILLON CONSULTING

PROJECT: 188035
STATUS: FINAL
DATE: 2019-02-12

	WEEKDAY						SATURDAY					SUNDAY		
	EARLY AM	AM PEAK	BASE	PM PEAK	EARLY EVE	LATE EVE	EARLY AM	BASE	PEAK	EARLY EVE	LATE EVE	EARLY AM	DAY	EVENING
EXISTING 2019	30	30	0	30	0	0	0	0	0	0	0	0	0	0
PROPOSED 2024	30	30	ASD	30	0	0	0	0	0	0	0	0	0	

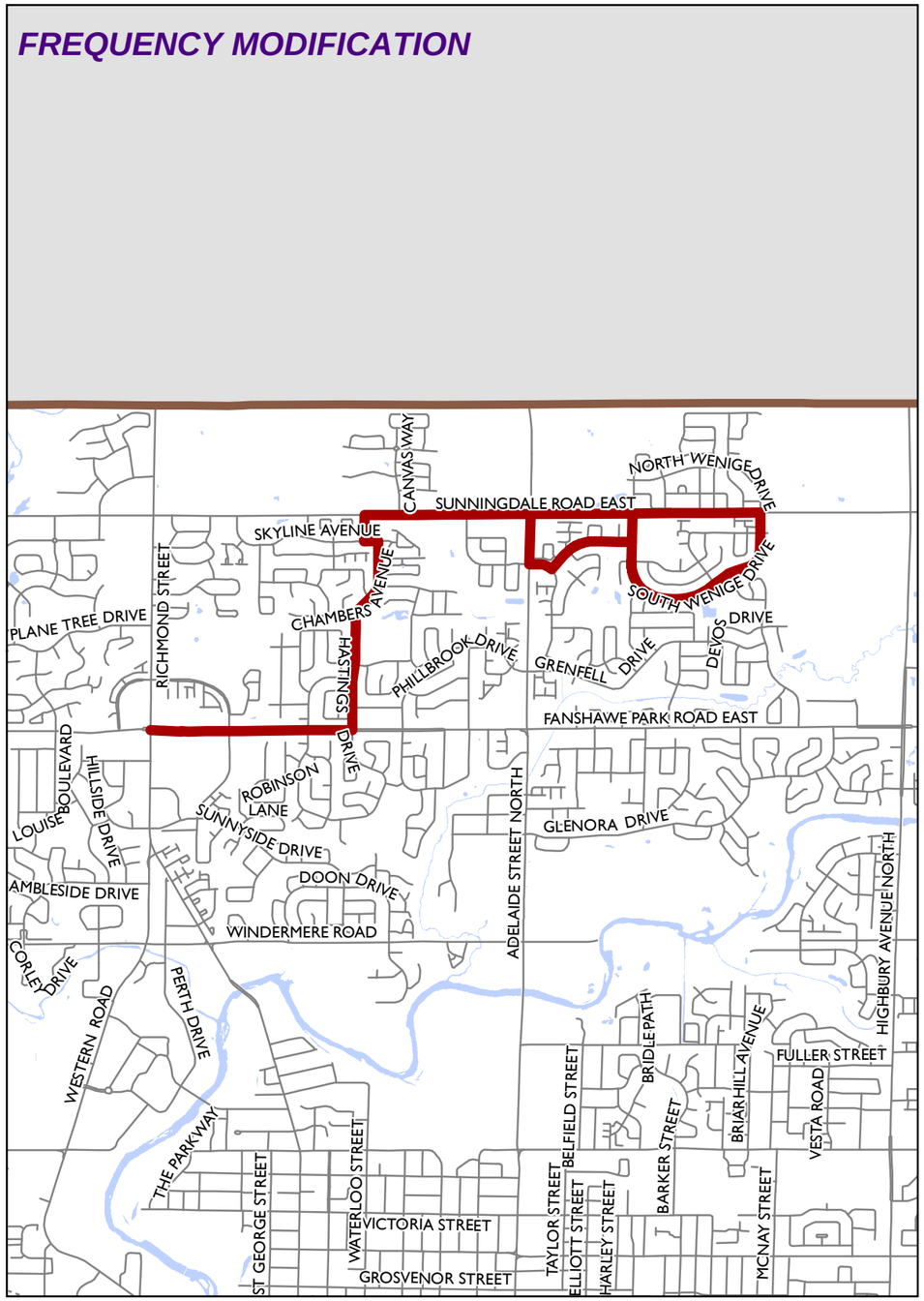
0

PLANNED 2019 NETWORK



PROPOSED 2024 NETWORK

FREQUENCY MODIFICATION



LONDON TRANSIT COMMISSION

5-YEAR SERVICE PLAN

LONDON TRANSIT NETWORK
ROUTE NUMBER: 38

- Municipal Boundary
- Railway
- Waterbody

Route
38

0 0.5 1 km

MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

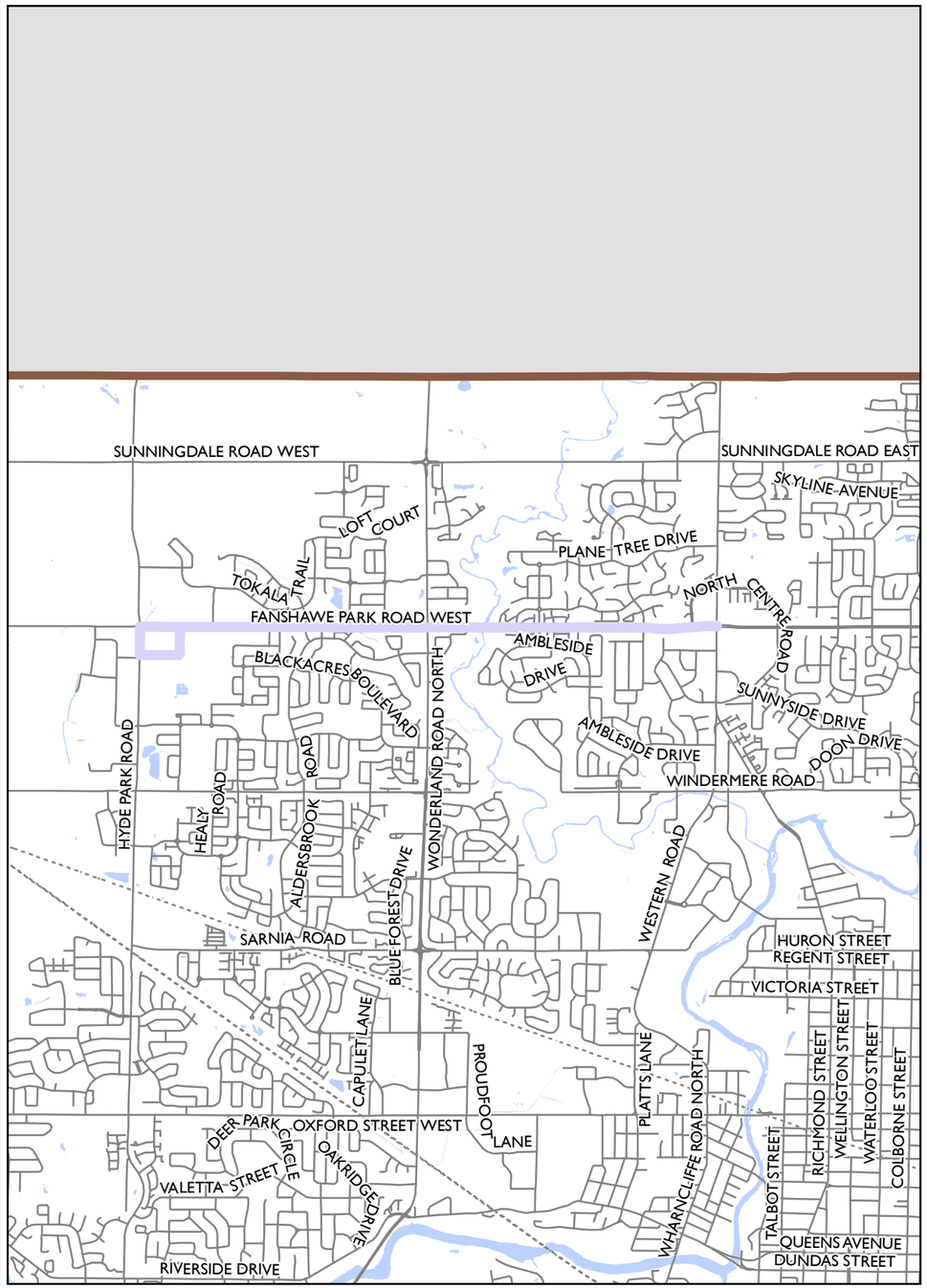
FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 188035
STATUS: FINAL
DATE: 2019-02-20

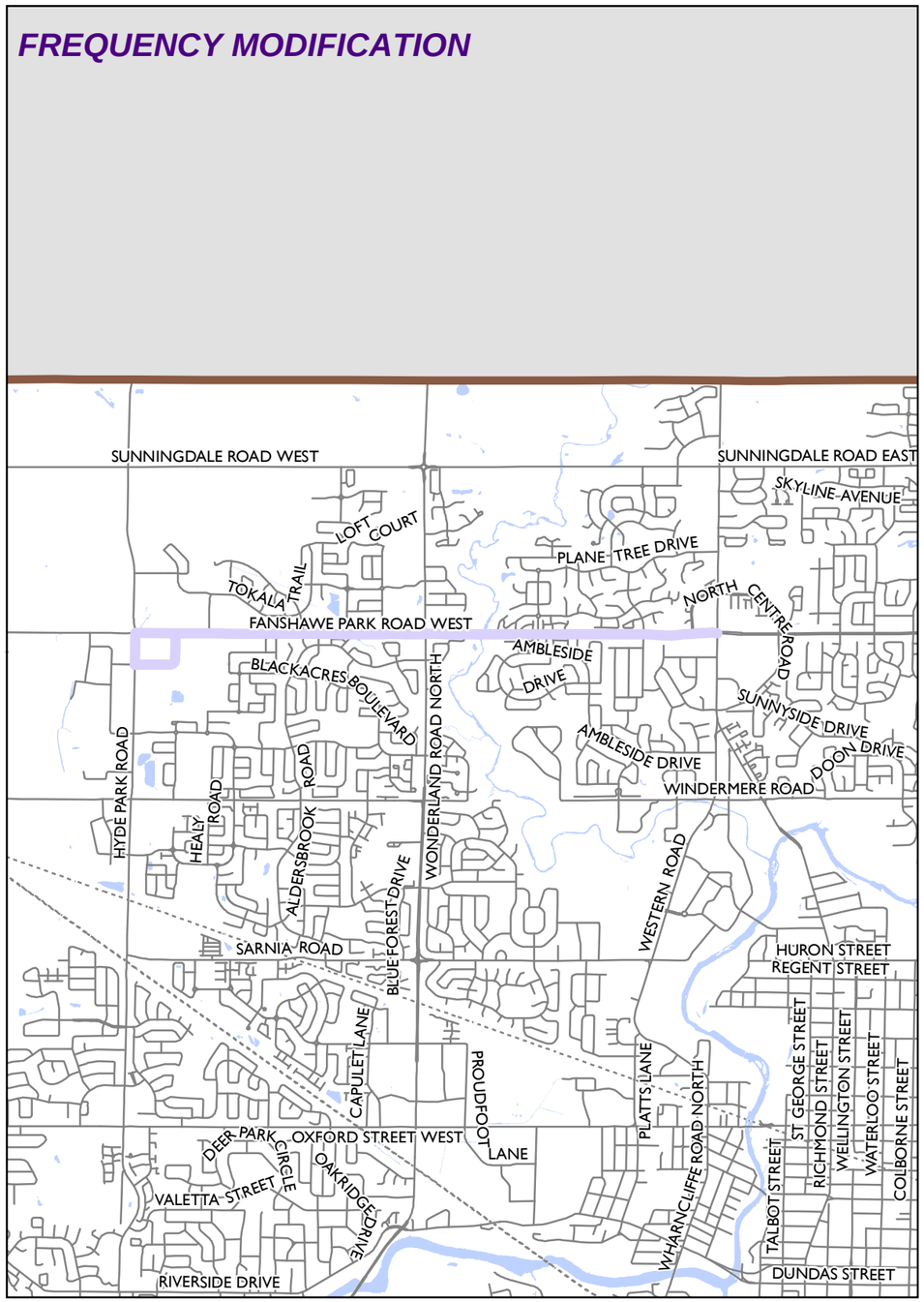
	WEEKDAY						SATURDAY					SUNDAY		
	EARLY AM	AM PEAK	BASE	PM PEAK	EARLY EVE	LATE EVE	EARLY AM	BASE	PEAK	EARLY EVE	LATE EVE	EARLY AM	DAY	EVENING
EXISTING 2019	33	28	27	30	35	47	0	47	32	52	47	47	50	48
PROPOSED 2024	33	28	27	30	35	30	0	30	32	30	30	30	30	30

PLANNED 2019 NETWORK



PROPOSED 2024 NETWORK

FREQUENCY MODIFICATION



LONDON TRANSIT COMMISSION

5-YEAR SERVICE PLAN

LONDON TRANSIT NETWORK
ROUTE NUMBER: 39

- Municipal Boundary
- Railway
- Waterbody

Route
39

0 0.5 1 km

MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

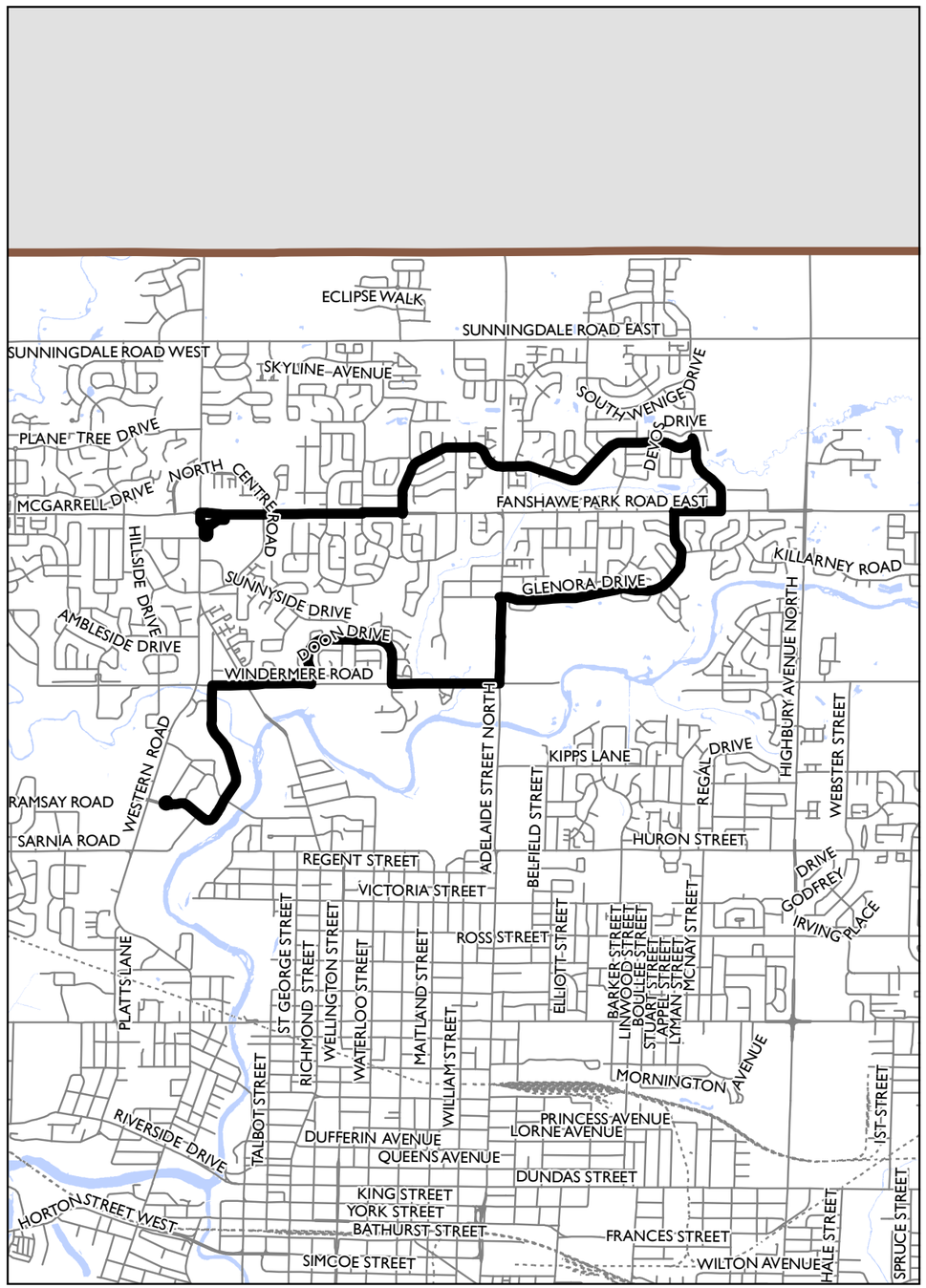
FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 188035
STATUS: FINAL
DATE: 2019-02-20

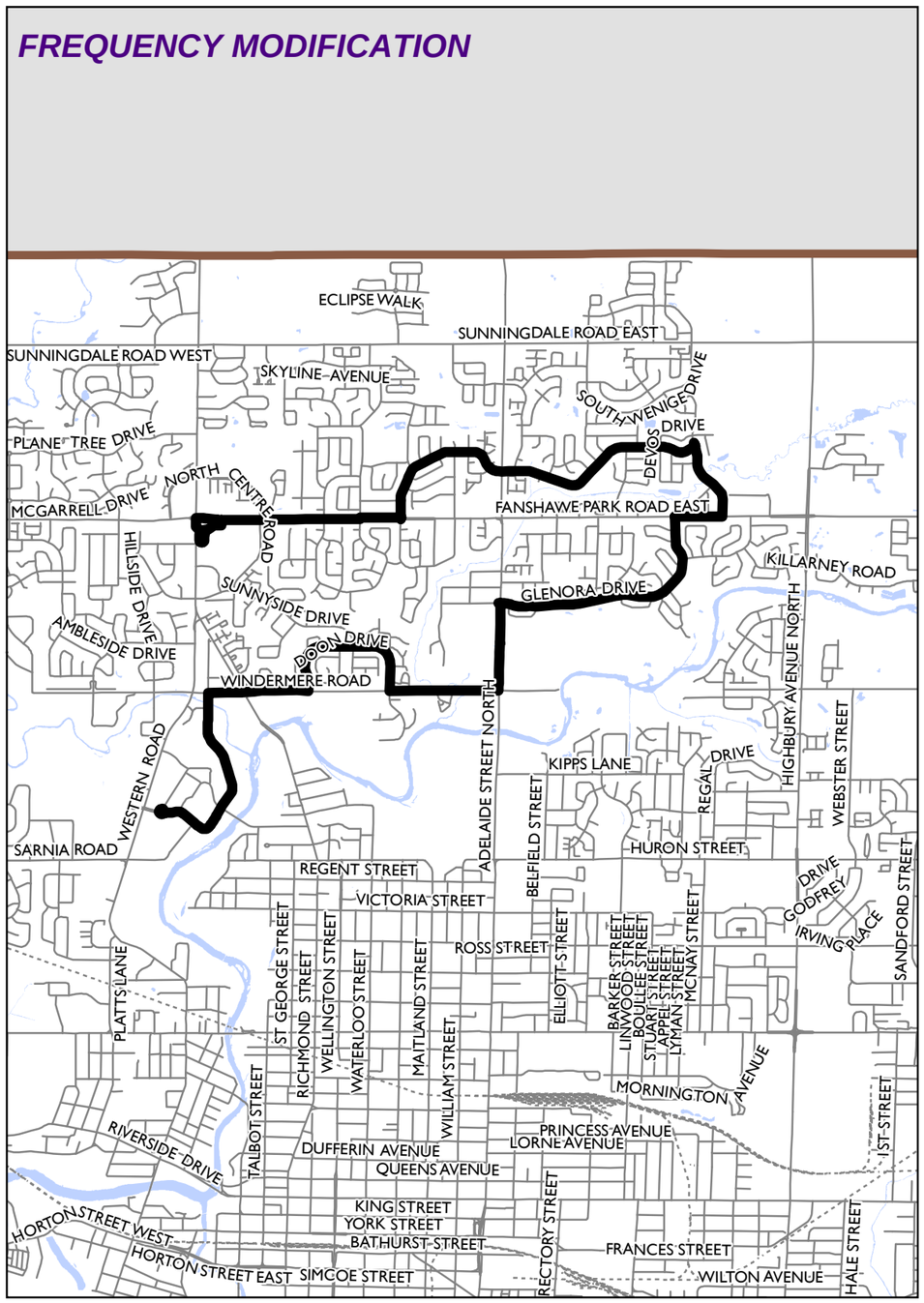
	WEEKDAY						SATURDAY					SUNDAY		
	EARLY AM	AM PEAK	BASE	PM PEAK	EARLY EVE	LATE EVE	EARLY AM	BASE	PEAK	EARLY EVE	LATE EVE	EARLY AM	DAY	EVENING
EXISTING 2019	33	28	27	30	35	47	0	47	32	52	47	47	50	48
PROPOSED 2024	33	28	27	30	35	30	0	30	32	30	30	30	30	30

PLANNED 2019 NETWORK



PROPOSED 2024 NETWORK

FREQUENCY MODIFICATION



LONDON TRANSIT COMMISSION

5-YEAR SERVICE PLAN

LONDON TRANSIT NETWORK
ROUTE NUMBER: 40

- Municipal Boundary
- Railway
- Waterbody

Route
40

0 0.5 1 km

MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

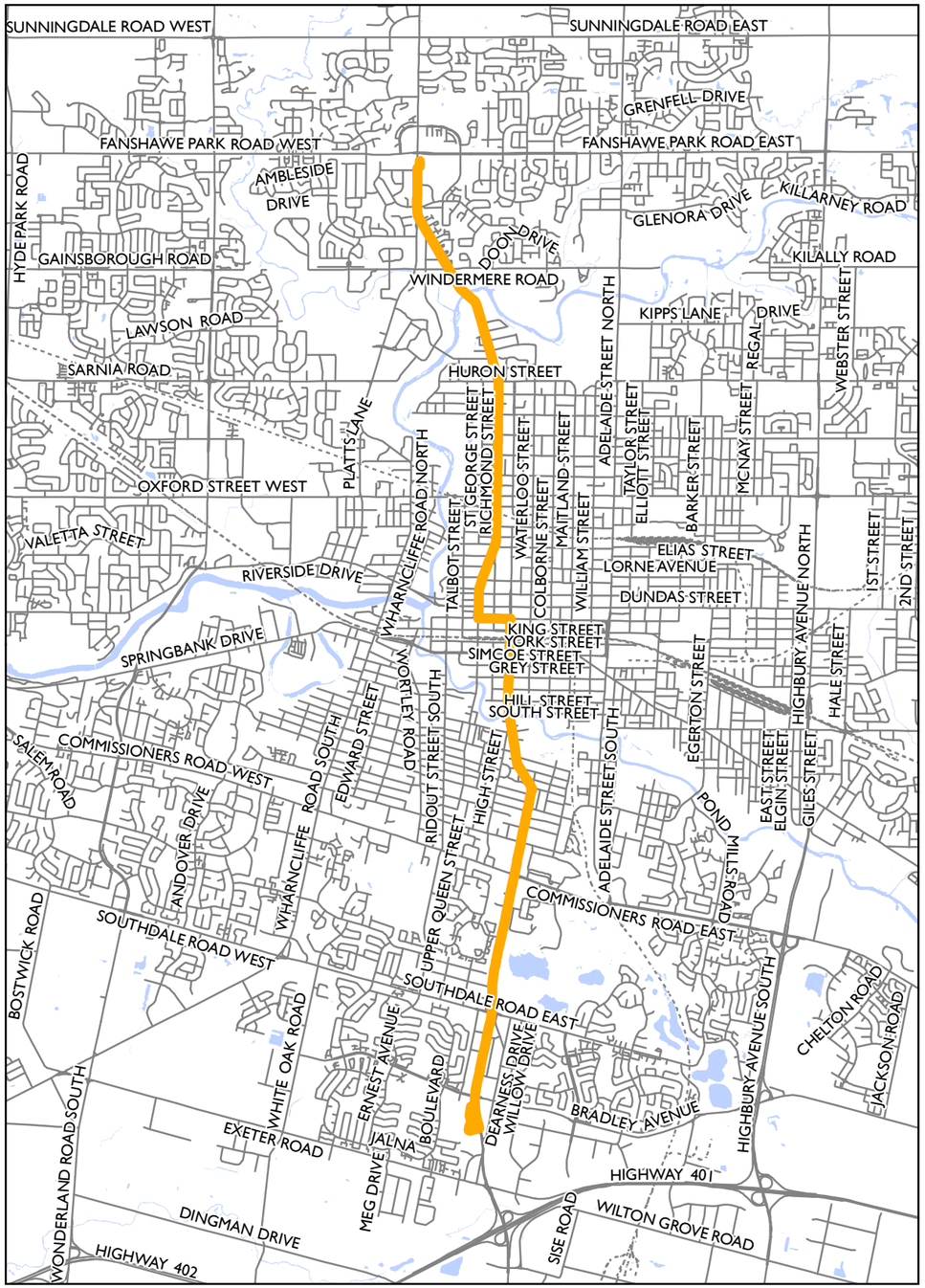
FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

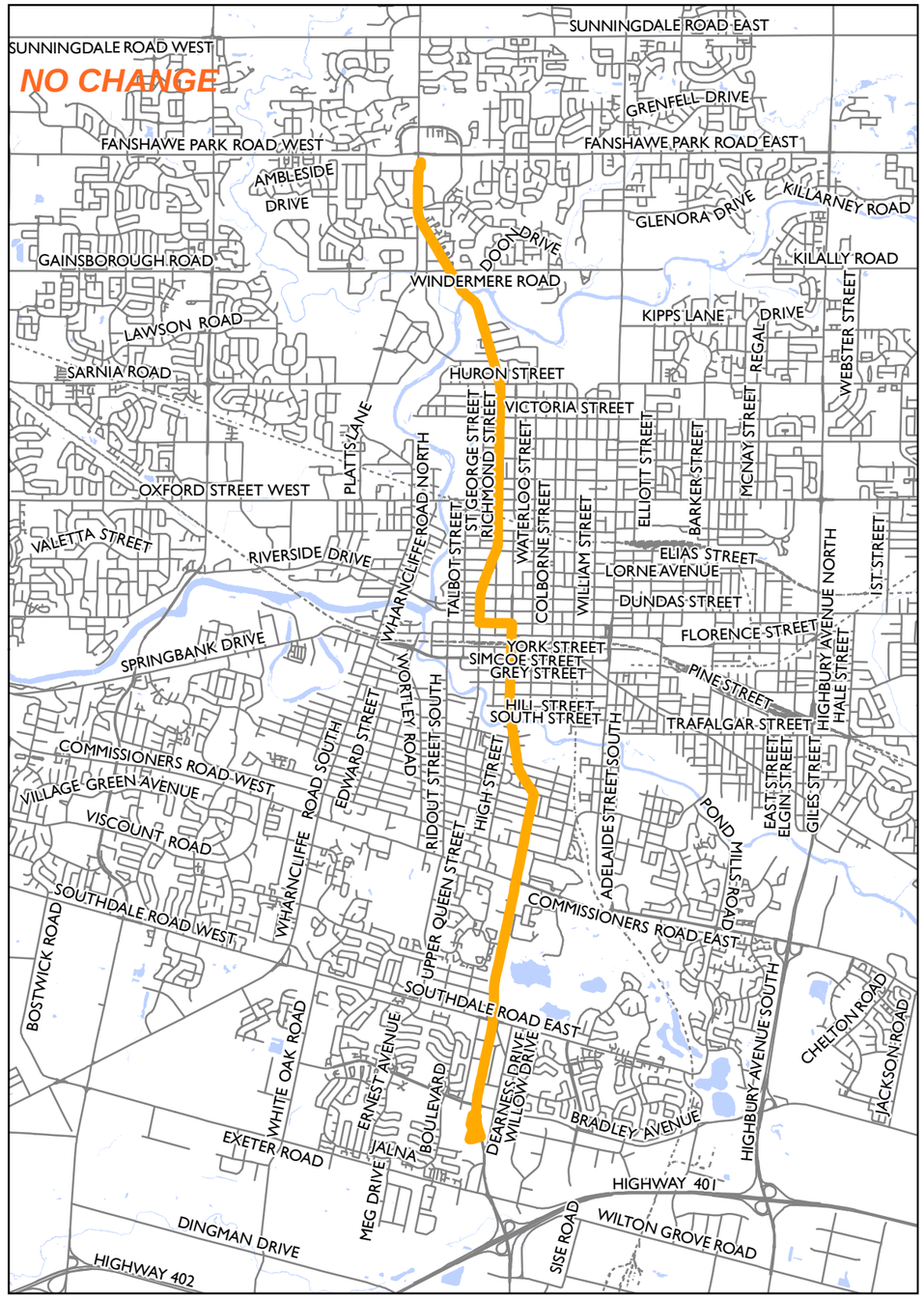
PROJECT: 188035
STATUS: FINAL
DATE: 2019-02-20

	WEEKDAY						SATURDAY					SUNDAY		
	EARLY AM	AM PEAK	BASE	PM PEAK	EARLY EVE	LATE EVE	EARLY AM	BASE	PEAK	EARLY EVE	LATE EVE	EARLY AM	DAY	EVENING
EXISTING 2019	30	45	60	45	60	60	30	30	40	60	60	60	40	60
PROPOSED 2024	30	30	30	30	30	30	30	30	30	30	30	30	30	30

PLANNED 2019 NETWORK



PROPOSED 2024 NETWORK



LONDON TRANSIT COMMISSION

5-YEAR SERVICE PLAN

LONDON TRANSIT NETWORK
ROUTE NUMBER: 90

- Municipal Boundary
- Railway
- Waterbody

Route
90

0 0.5 1 km

MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

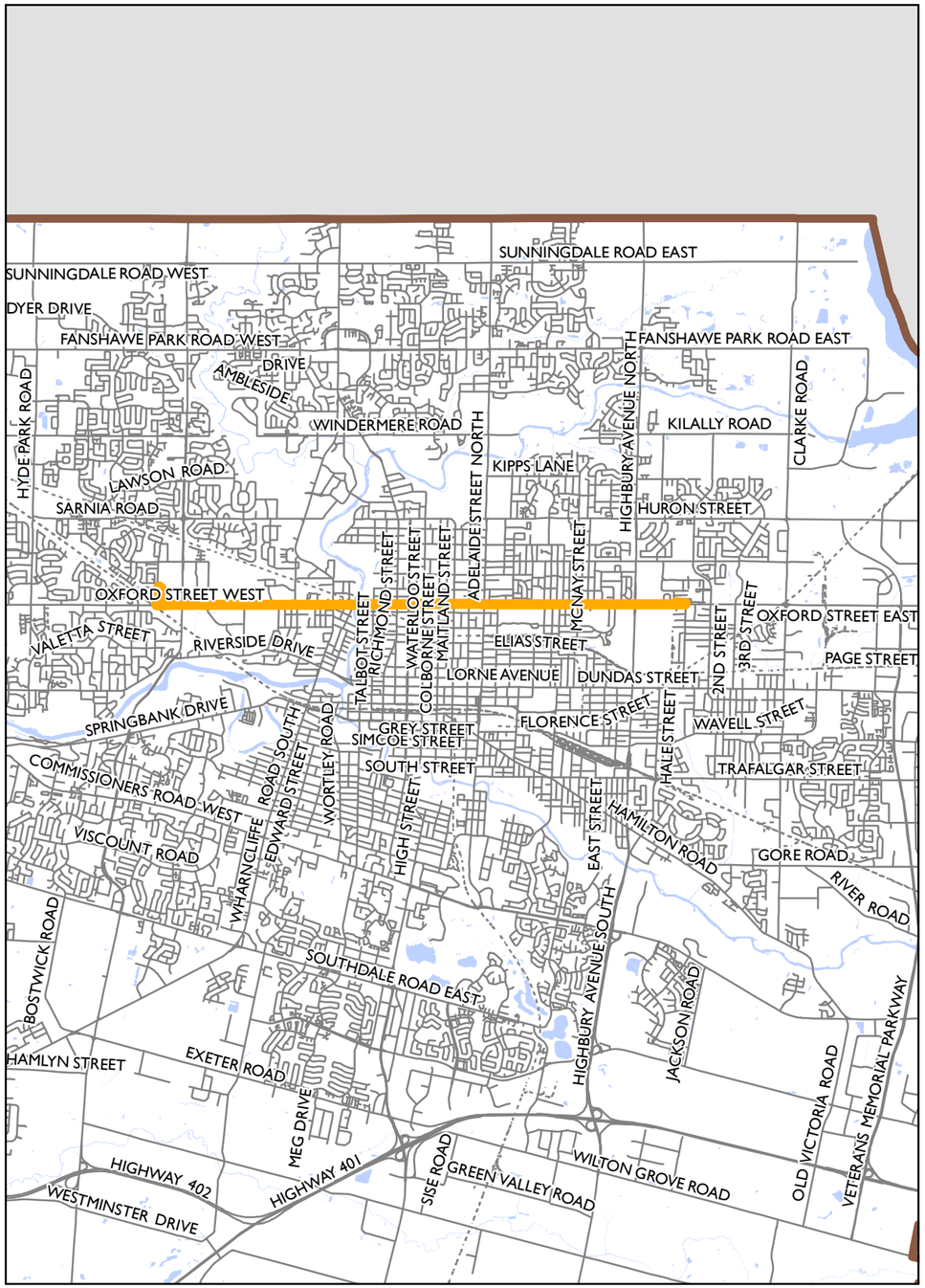
FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 188035
STATUS: FINAL
DATE: 2019-02-20

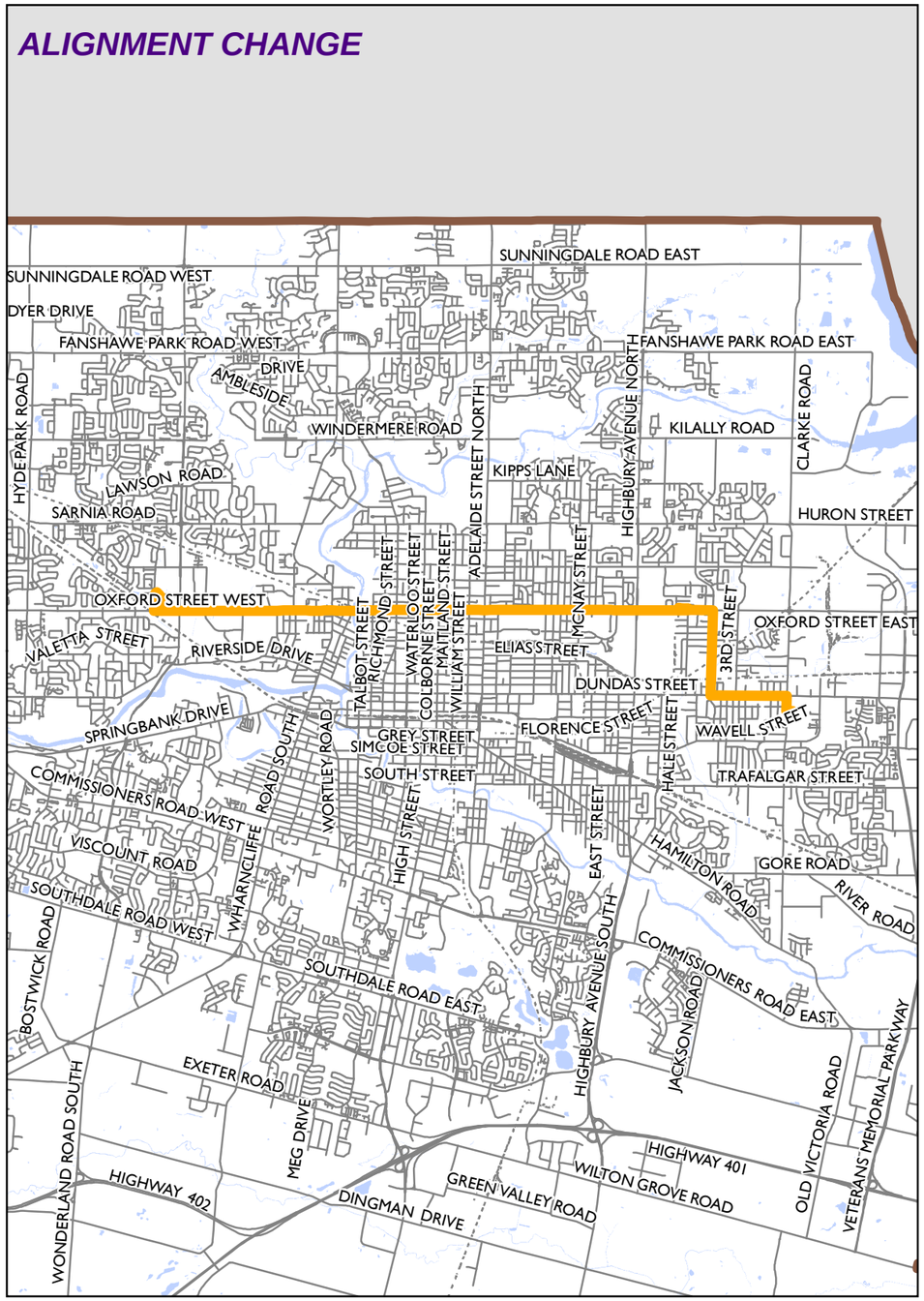
	WEEKDAY						SATURDAY					SUNDAY		
	EARLY AM	AM PEAK	BASE	PM PEAK	EARLY EVE	LATE EVE	EARLY AM	BASE	PEAK	EARLY EVE	LATE EVE	EARLY AM	DAY	EVENING
EXISTING 2019	30	15	15	15	35	0	0	30	25	0	0	20	20	30
PROPOSED 2024	30	15	15	15	35	0	0	30	25	0	0	20	20	30

PLANNED 2019 NETWORK



PROPOSED 2024 NETWORK

ALIGNMENT CHANGE



LONDON TRANSIT COMMISSION

5-YEAR SERVICE PLAN

LONDON TRANSIT NETWORK
ROUTE NUMBER: 91

- Municipal Boundary
- Railway
- Waterbody

Route
91

0 0.5 1 km

MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

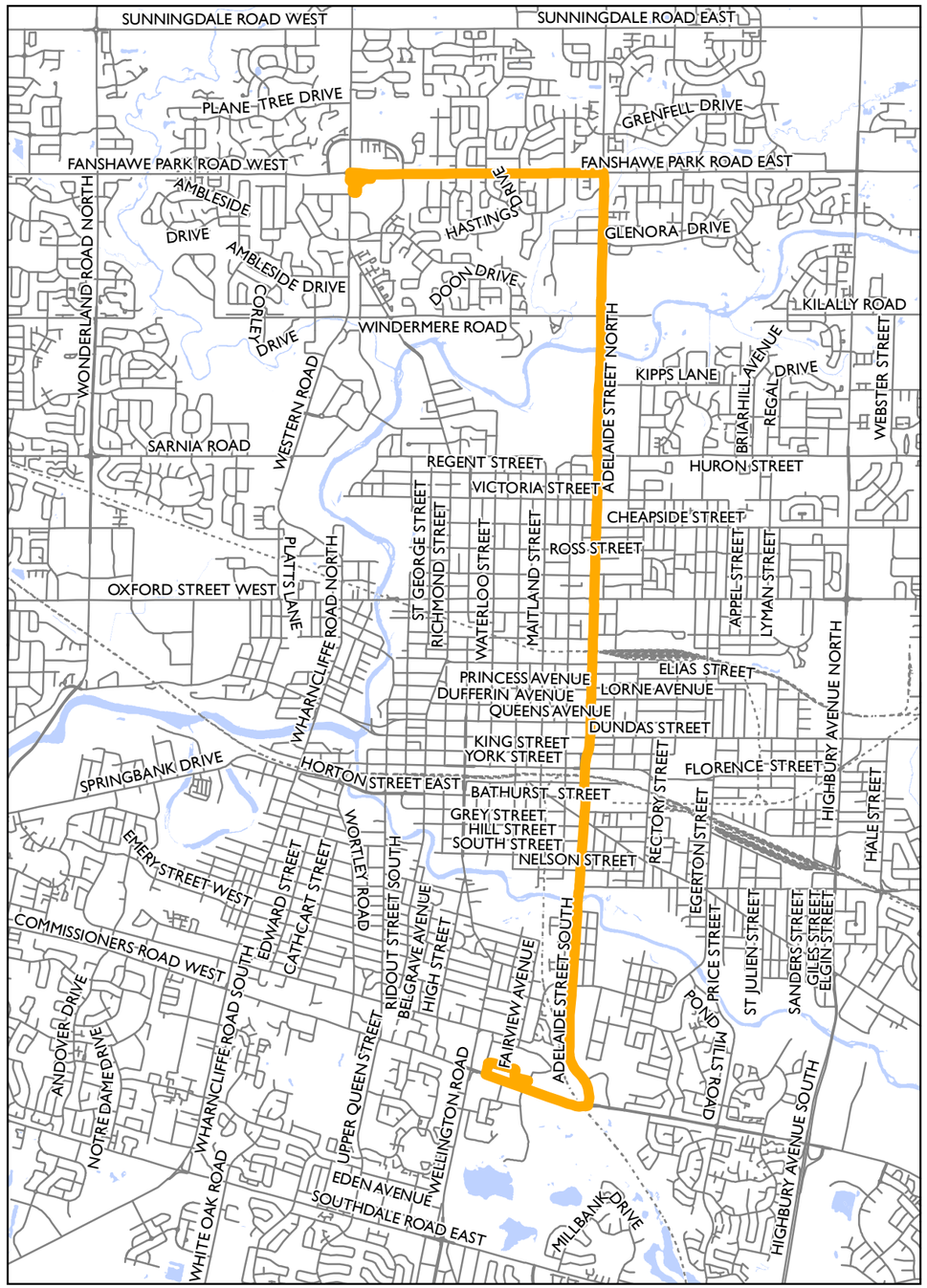
FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

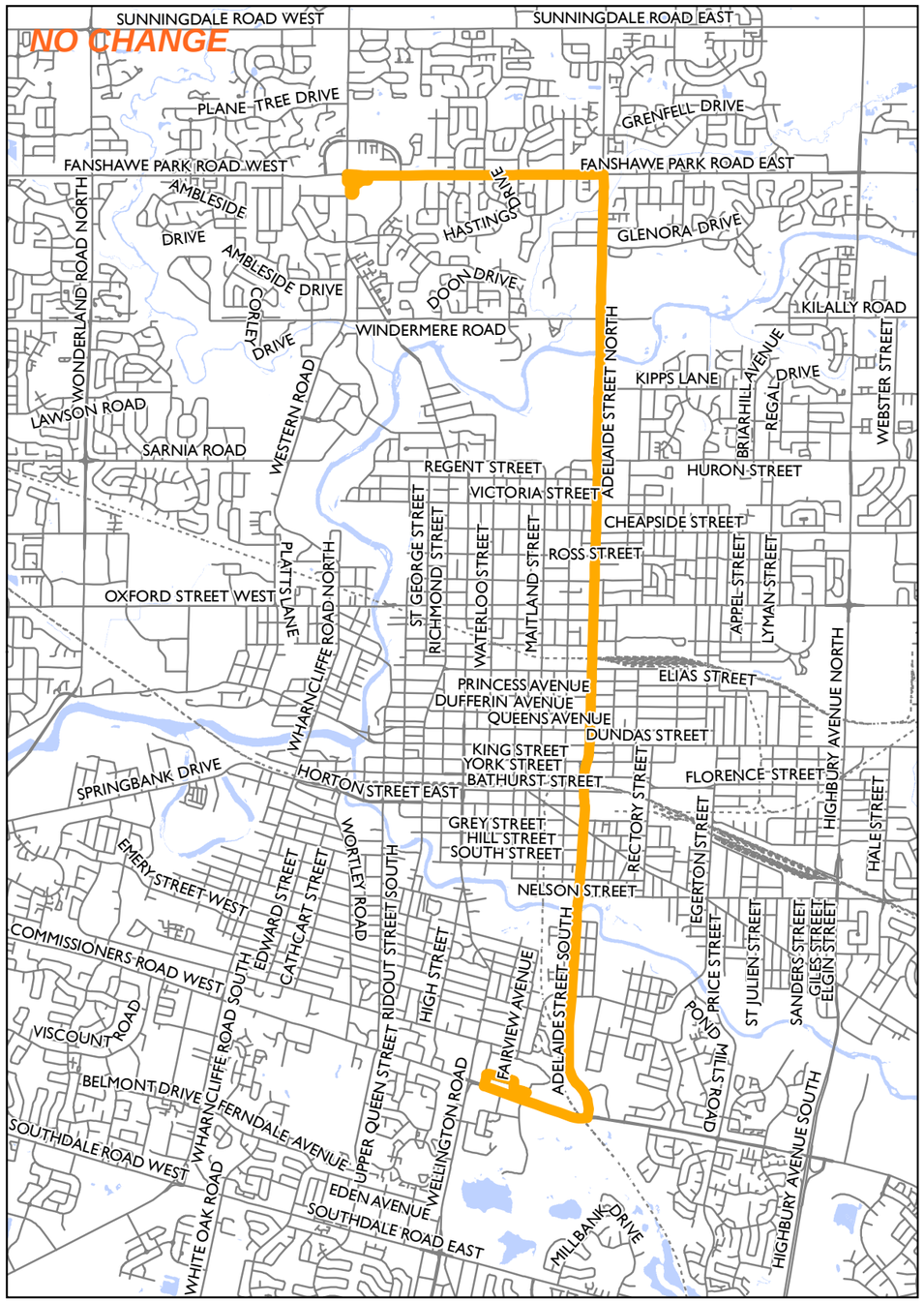
PROJECT: 188035
STATUS: FINAL
DATE: 2019-02-20

	WEEKDAY						SATURDAY					SUNDAY		
	EARLY AM	AM PEAK	BASE	PM PEAK	EARLY EVE	LATE EVE	EARLY AM	BASE	PEAK	EARLY EVE	LATE EVE	EARLY AM	DAY	EVENING
EXISTING 2019	0	15	20	15	15	0	0	0	25	25	0	0	25	25
PROPOSED 2024	0	15	20	15	15	0	0	0	25	25	0	0	25	25

PLANNED 2019 NETWORK



PROPOSED 2024 NETWORK



LONDON TRANSIT COMMISSION

5-YEAR SERVICE PLAN

LONDON TRANSIT NETWORK
ROUTE NUMBER: 92

- Municipal Boundary
- Railway
- Waterbody

Route
92

0 0.5 1 km

MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

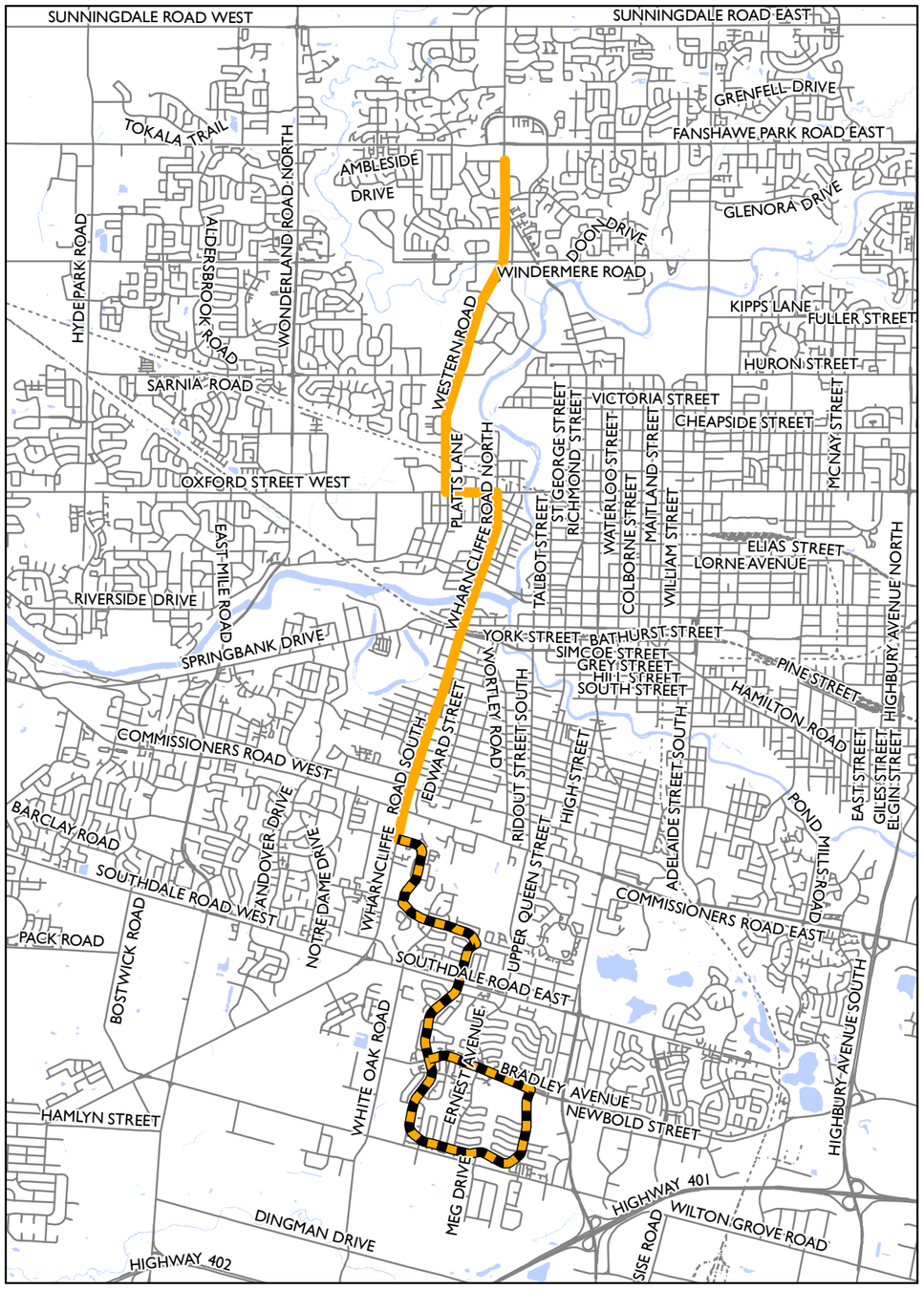
FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

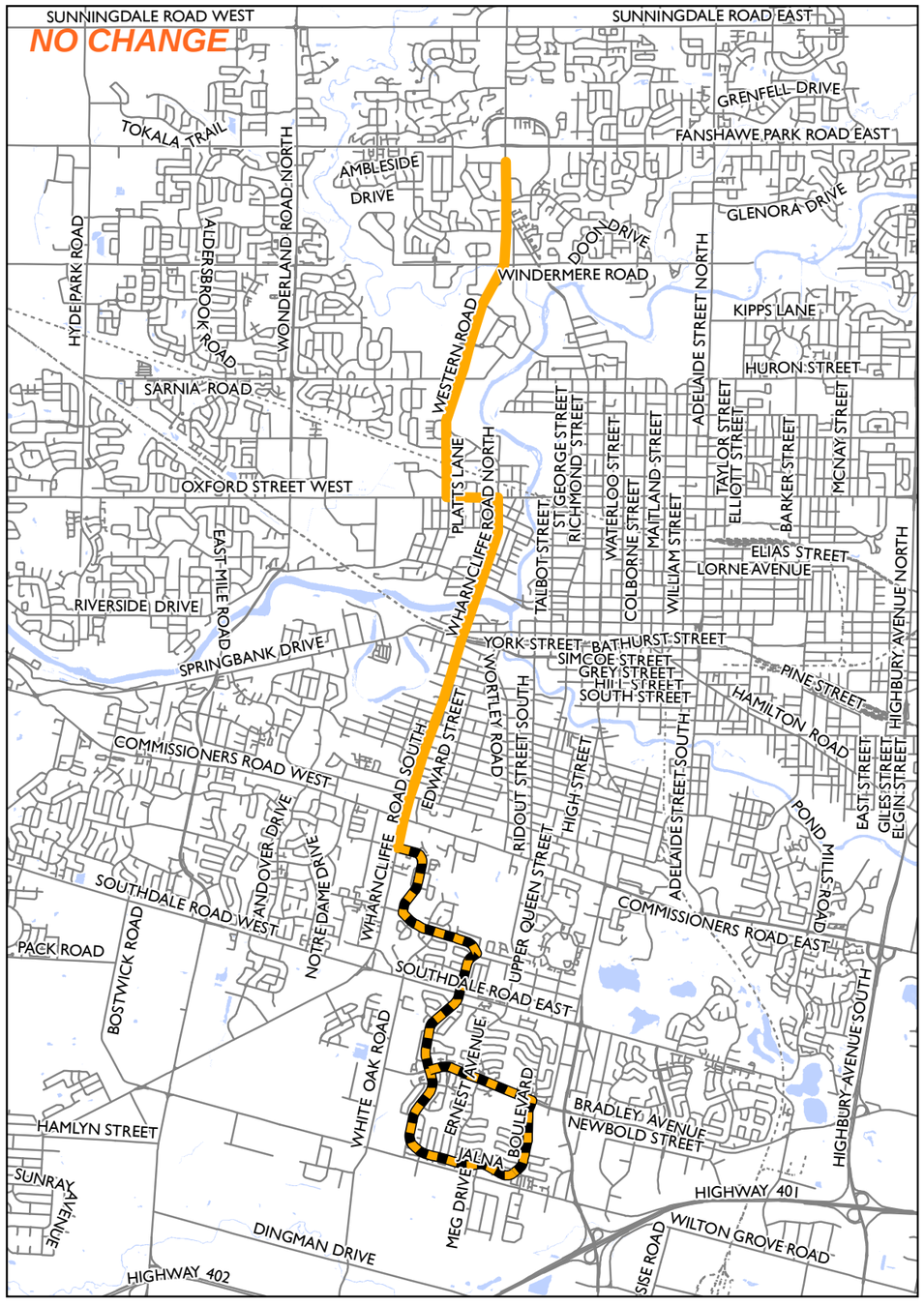
PROJECT: 188035
STATUS: FINAL
DATE: 2019-02-20

	WEEKDAY						SATURDAY					SUNDAY		
	EARLY AM	AM PEAK	BASE	PM PEAK	EARLY EVE	LATE EVE	EARLY AM	BASE	PEAK	EARLY EVE	LATE EVE	EARLY AM	DAY	EVENING
EXISTING 2019	0	22	32	25	32	0	0	0	0	0	0	0	0	0
PROPOSED 2024	0	22	32	25	32	0	0	0	0	0	0	0	0	0

PLANNED 2019 NETWORK



PROPOSED 2024 NETWORK



LONDON TRANSIT COMMISSION

5-YEAR SERVICE PLAN

LONDON TRANSIT NETWORK
ROUTE NUMBER: 93

- Municipal Boundary
- Railway
- Waterbody

Route Typology
- Express
- Local

0 0.5 1 km

MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

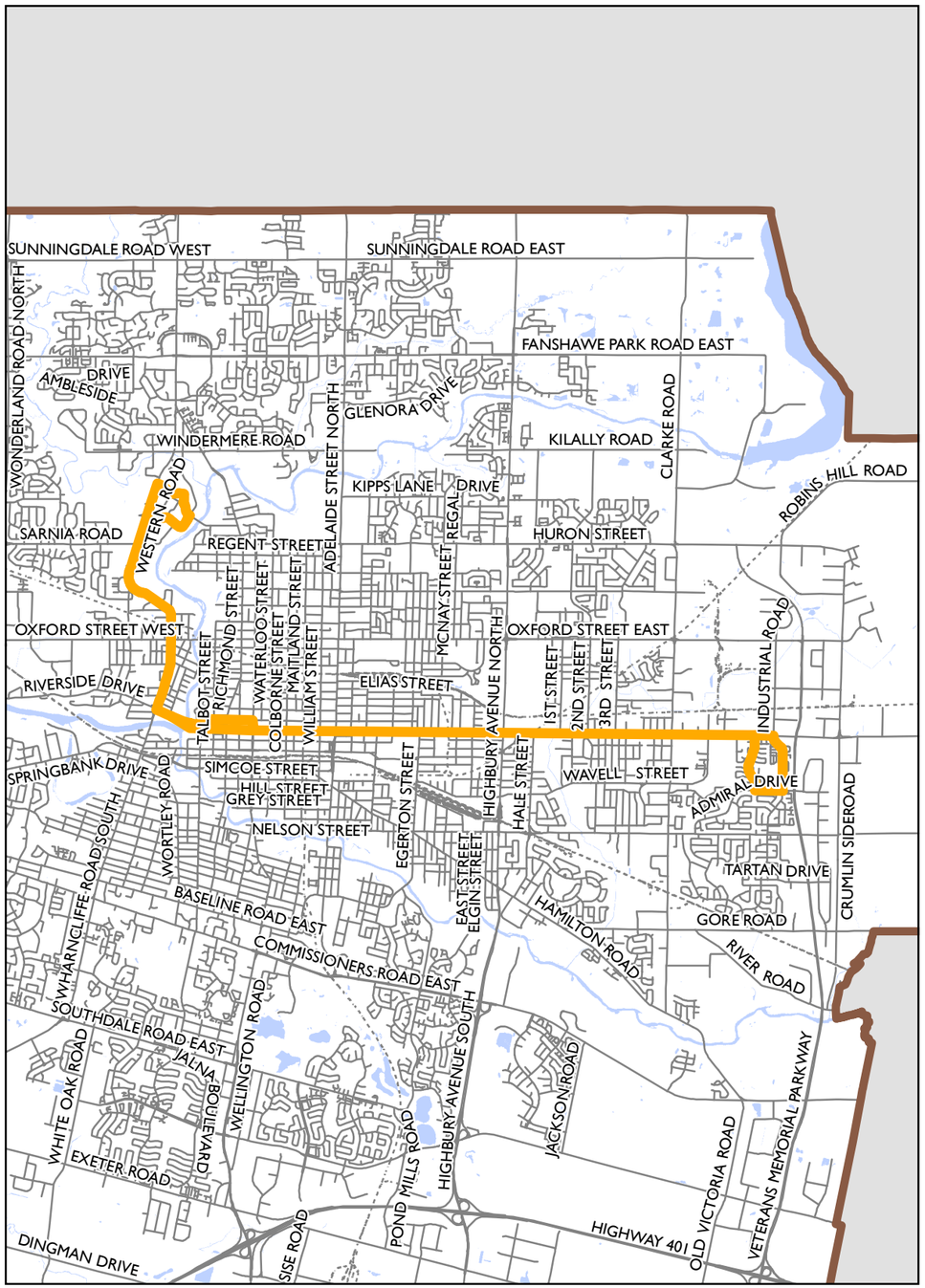
FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 188035
STATUS: FINAL
DATE: 2019-02-12

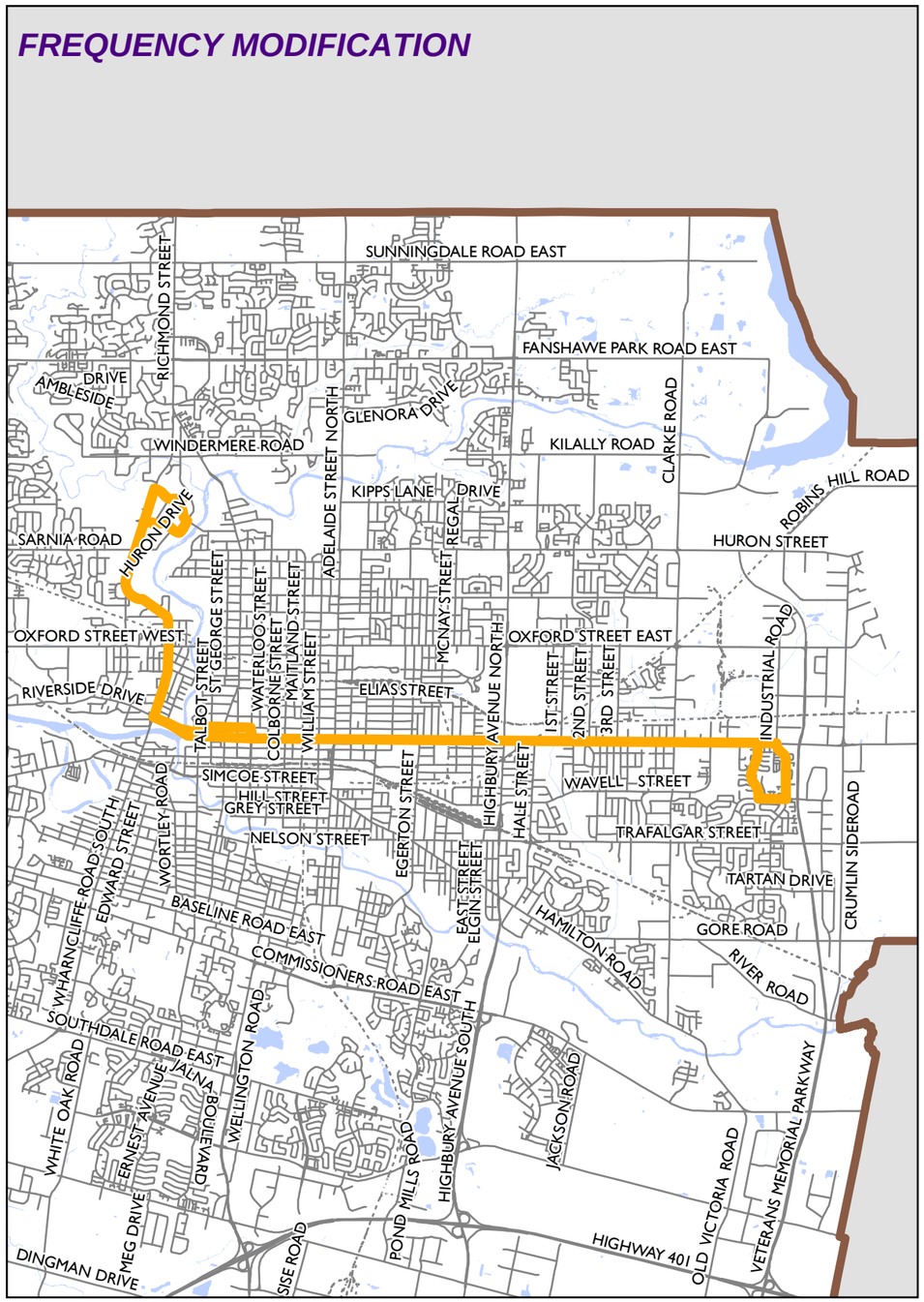
	WEEKDAY						SATURDAY					SUNDAY		
	EARLY AM	AM PEAK	BASE	PM PEAK	EARLY EVE	LATE EVE	EARLY AM	BASE	PEAK	EARLY EVE	LATE EVE	EARLY AM	DAY	EVENING
EXISTING 2019	27	27	26	23	26	26	36	36	26	26	26	35	37	37
PROPOSED 2024	27	27	26	23	26	26	36	36	26	26	26	35	37	37

PLANNED 2019 NETWORK



PROPOSED 2024 NETWORK

FREQUENCY MODIFICATION



LONDON TRANSIT COMMISSION

5-YEAR SERVICE PLAN

LONDON TRANSIT NETWORK
ROUTE NUMBER: 94

- Municipal Boundary
- Railway
- Waterbody

Route
94

0 0.5 1 km

MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

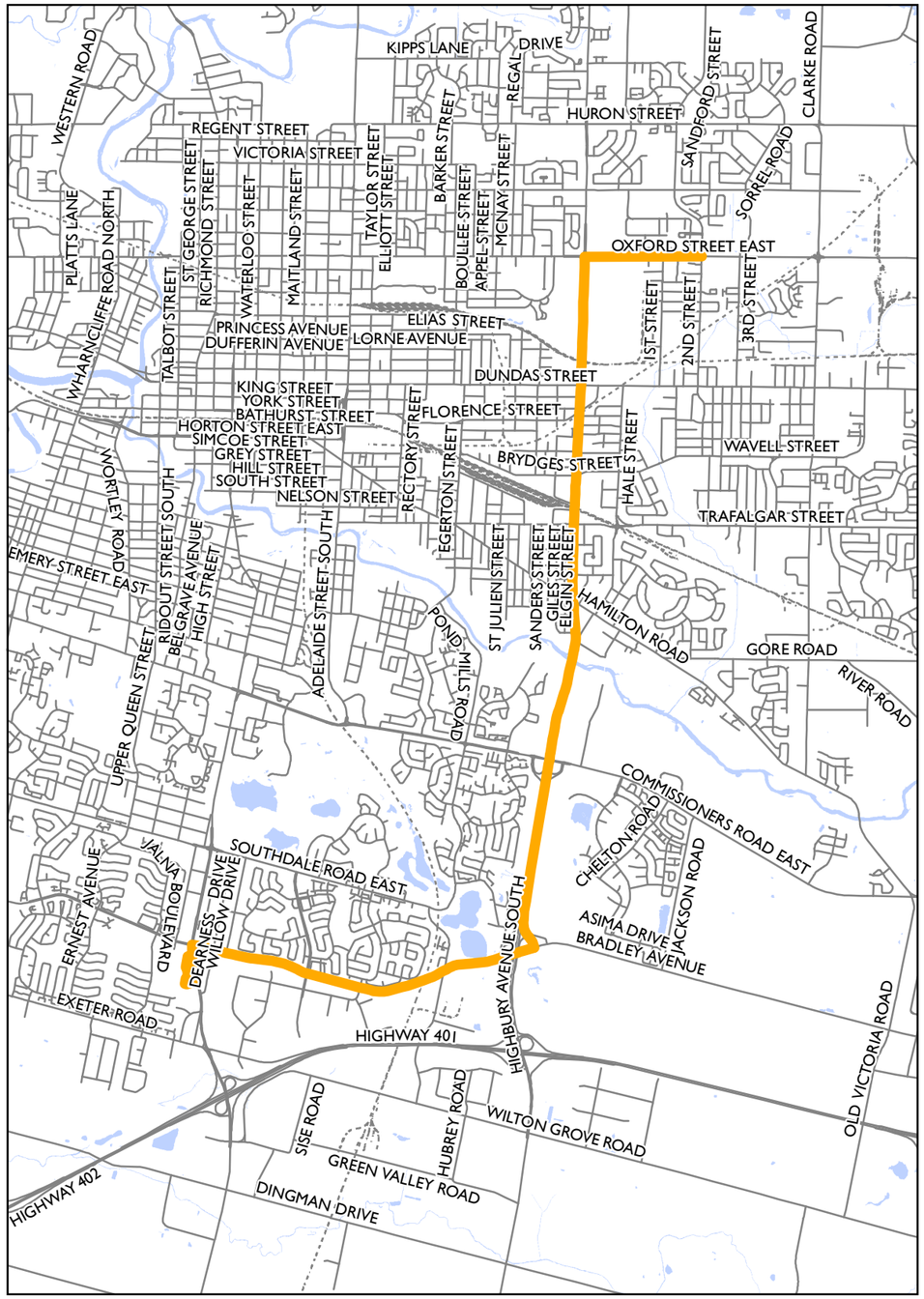
FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 188035
STATUS: FINAL
DATE: 2019-02-20

	WEEKDAY						SATURDAY					SUNDAY		
	EARLY AM	AM PEAK	BASE	PM PEAK	EARLY EVE	LATE EVE	EARLY AM	BASE	PEAK	EARLY EVE	LATE EVE	EARLY AM	DAY	EVENING
EXISTING 2019	0	26	0	23	0	0	0	0	0	0	0	0	0	0
PROPOSED 2024	0	20	20	15	0	0	0	0	0	0	0	0	0	0

PROPOSED NEW ROUTE 2024



LONDON TRANSIT COMMISSION

5-YEAR SERVICE PLAN

LONDON TRANSIT NETWORK
ROUTE NUMBER: 95

- Municipal Boundary
- Railway
- Waterbody

Route
95

0 0.5 1 km

MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

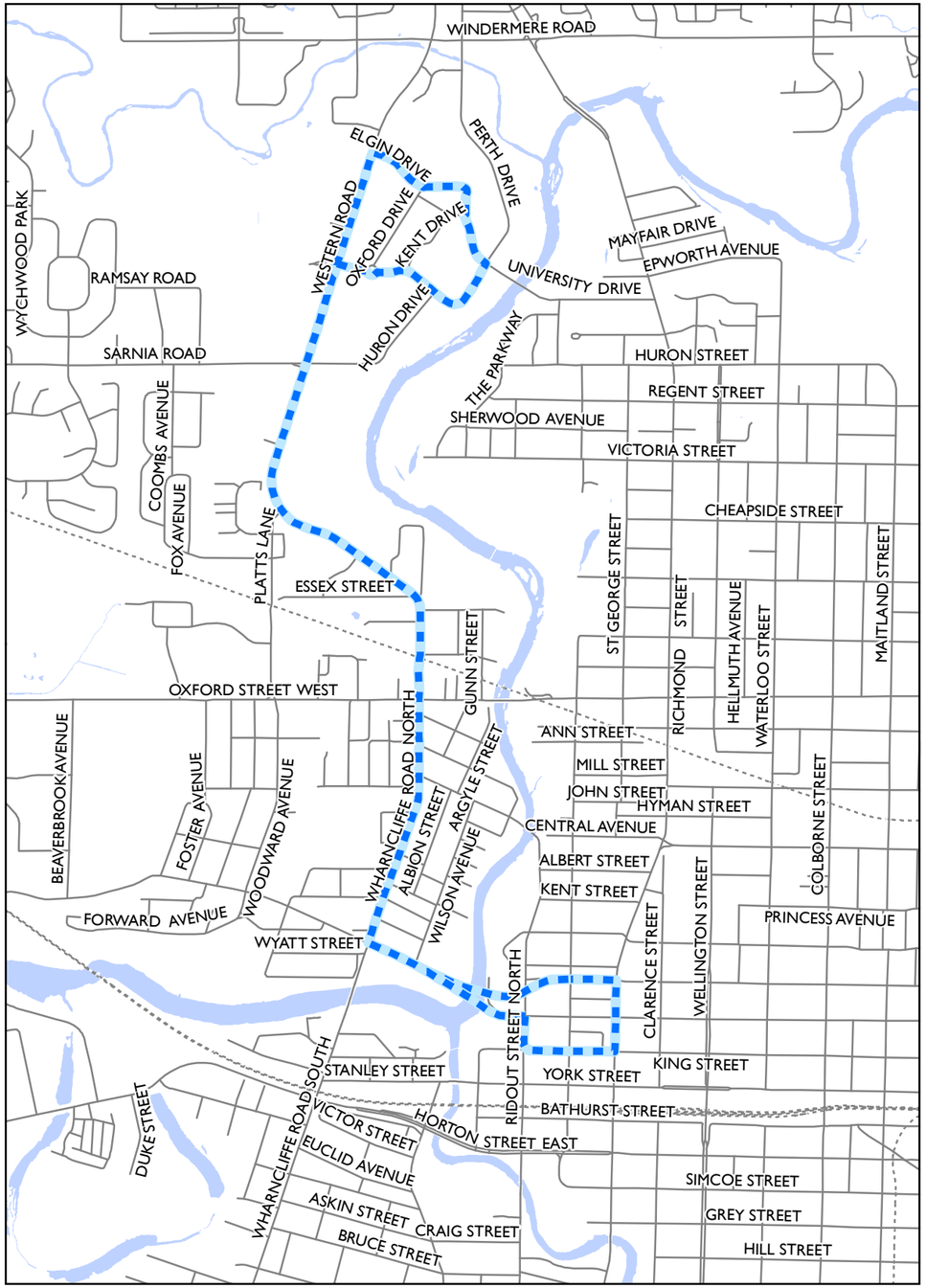
FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 188035
STATUS: FINAL
DATE: 2019-02-12

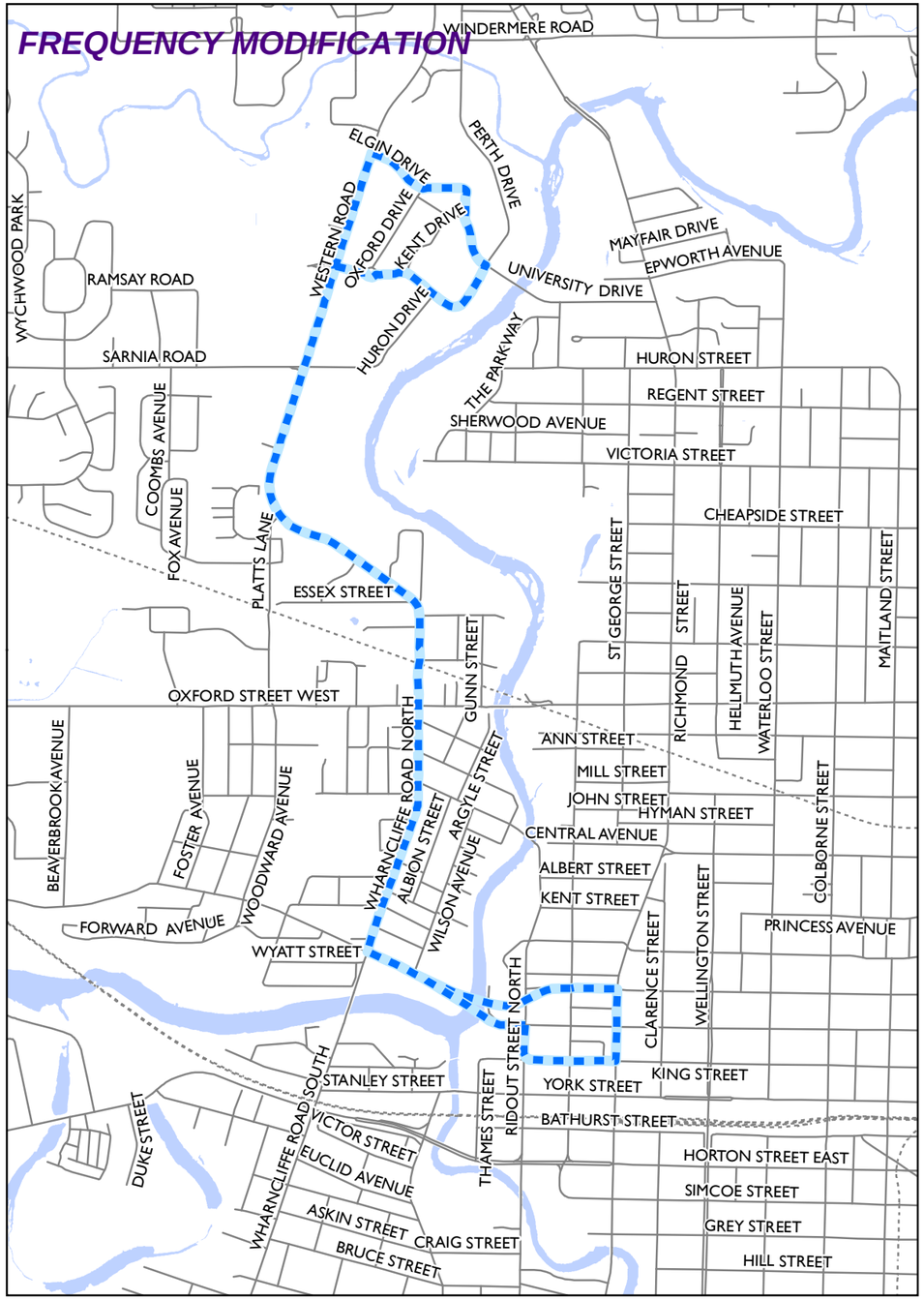
	WEEKDAY						SATURDAY					SUNDAY		
	EARLY AM	AM PEAK	BASE	PM PEAK	EARLY EVE	LATE EVE	EARLY AM	BASE	PEAK	EARLY EVE	LATE EVE	EARLY AM	DAY	EVENING
PROPOSED 2024	0	20	20	20	20	0	0	0	0	0	0	0	0	0

PLANNED 2019 NETWORK



PROPOSED 2024 NETWORK

FREQUENCY MODIFICATION



LONDON TRANSIT COMMISSION

5-YEAR SERVICE PLAN

LONDON TRANSIT NETWORK
ROUTE NUMBER: 102

- Municipal Boundary
- Railway
- Waterbody

Route
- 102

0 0.5 1 km

MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

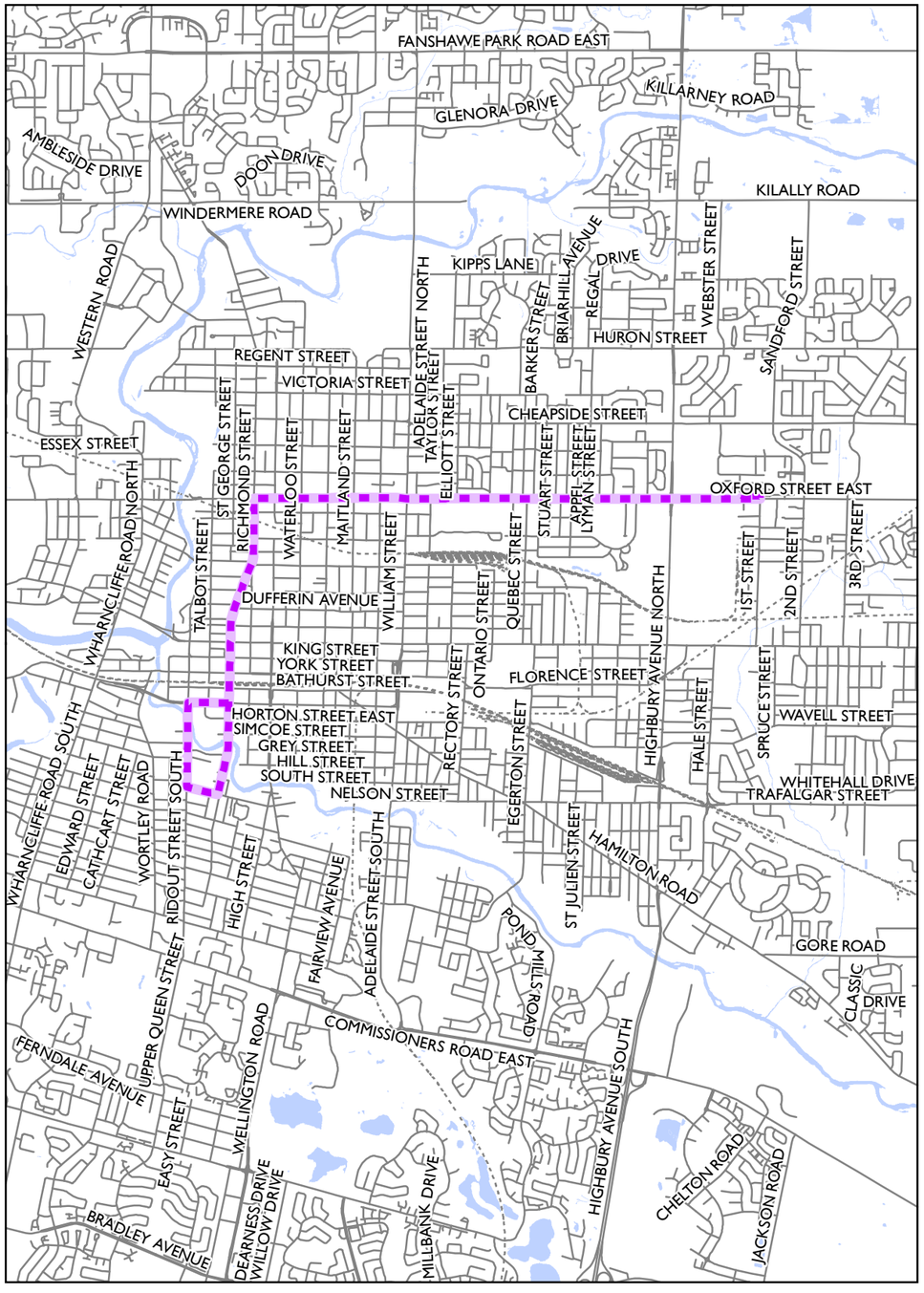
FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

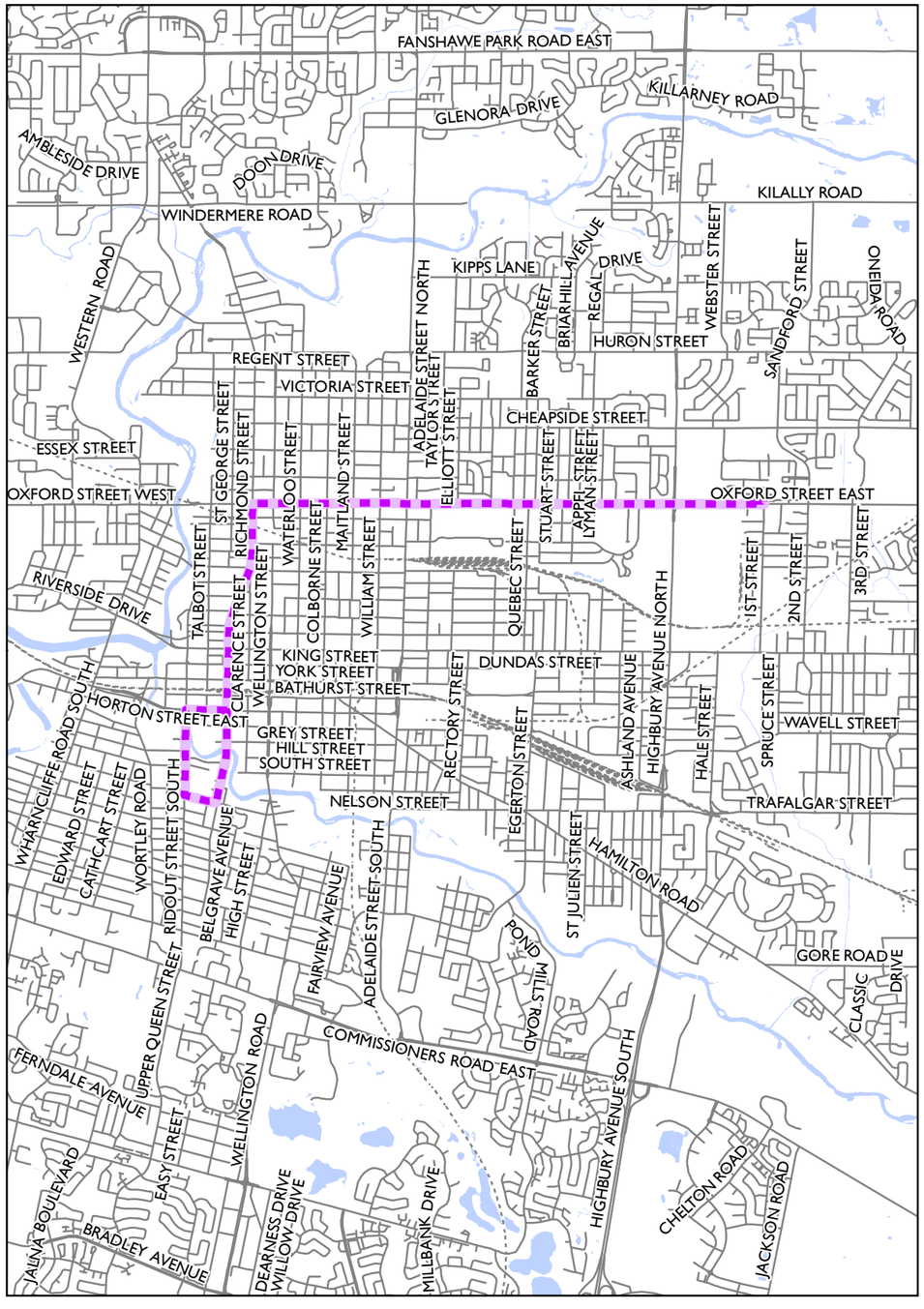
PROJECT: 188035
STATUS: FINAL
DATE: 2019-02-20

	WEEKDAY						SATURDAY					SUNDAY		
	EARLY AM	AM PEAK	BASE	PM PEAK	EARLY EVE	LATE EVE	EARLY AM	BASE	PEAK	EARLY EVE	LATE EVE	EARLY AM	DAY	EVENING
EXISTING 2019	0	10	10	12	20	35	0	0	40	40	40	0	0	0
PROPOSED 2024	0	10	10	12	15	20	0	0	40	40	40	0	0	0

PLANNED 2019 NETWORK



PROPOSED 2024 NETWORK



LONDON TRANSIT COMMISSION

5-YEAR SERVICE PLAN

LONDON TRANSIT NETWORK
ROUTE NUMBER: 104

- Municipal Boundary
- Railway
- Waterbody

Route
- 104

0 0.5 1 km

MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

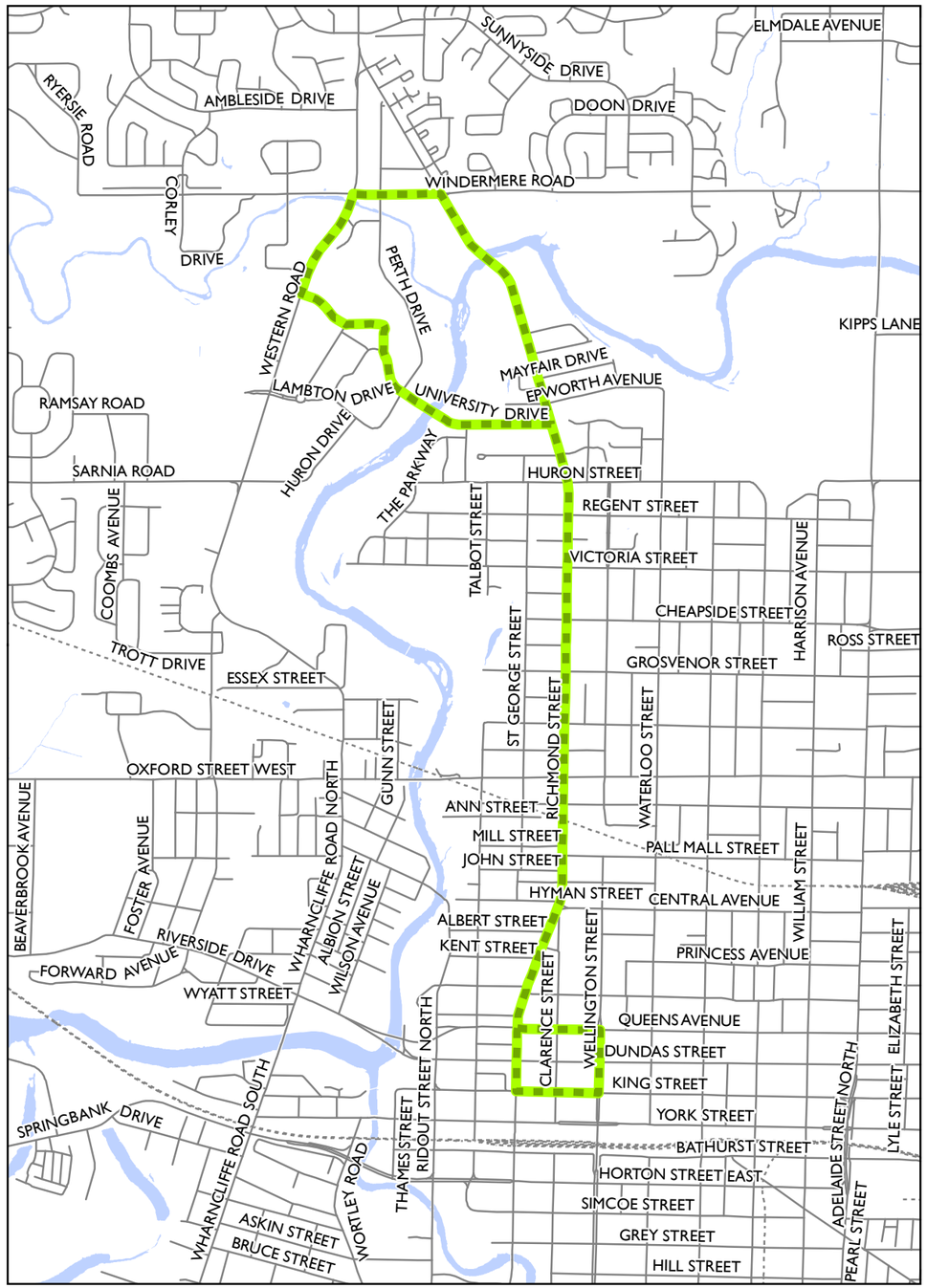
FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

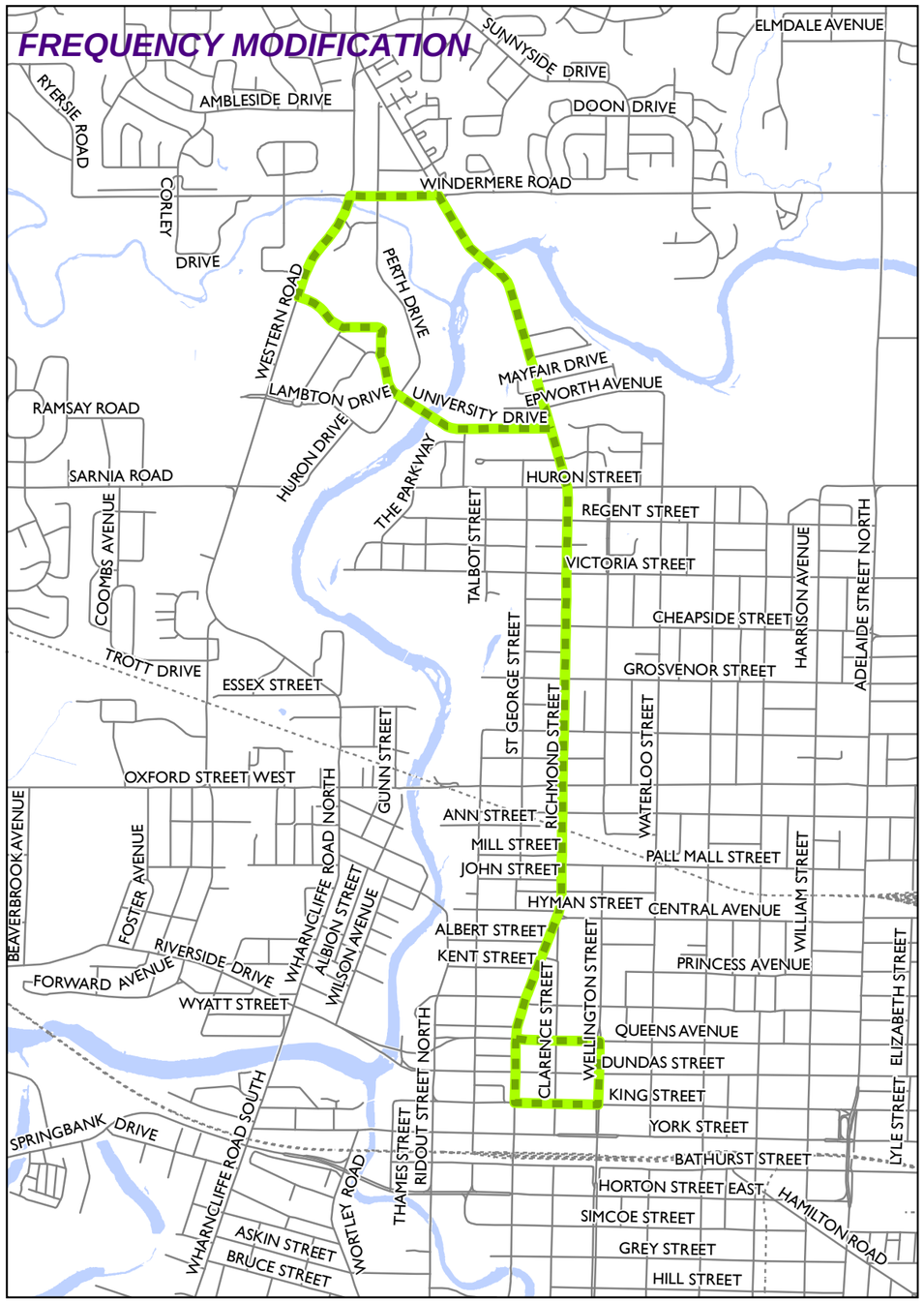
PROJECT: 188035
STATUS: FINAL
DATE: 2019-02-20

	WEEKDAY						SATURDAY					SUNDAY		
	EARLY AM	AM PEAK	BASE	PM PEAK	EARLY EVE	LATE EVE	EARLY AM	BASE	PEAK	EARLY EVE	LATE EVE	EARLY AM	DAY	EVENING
EXISTING 2019	30	30	30	30	0	0	0	30	30	0	0	0	0	0
PROPOSED 2024	30	30	30	30	0	0	0	30	30	0	0	0	0	0

PLANNED 2019 NETWORK



PROPOSED 2024 NETWORK



LONDON TRANSIT COMMISSION

5-YEAR SERVICE PLAN

LONDON TRANSIT NETWORK
ROUTE NUMBER: 106

- Municipal Boundary
- Railway
- Waterbody

Route
- 106

0 0.5 1 km

MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

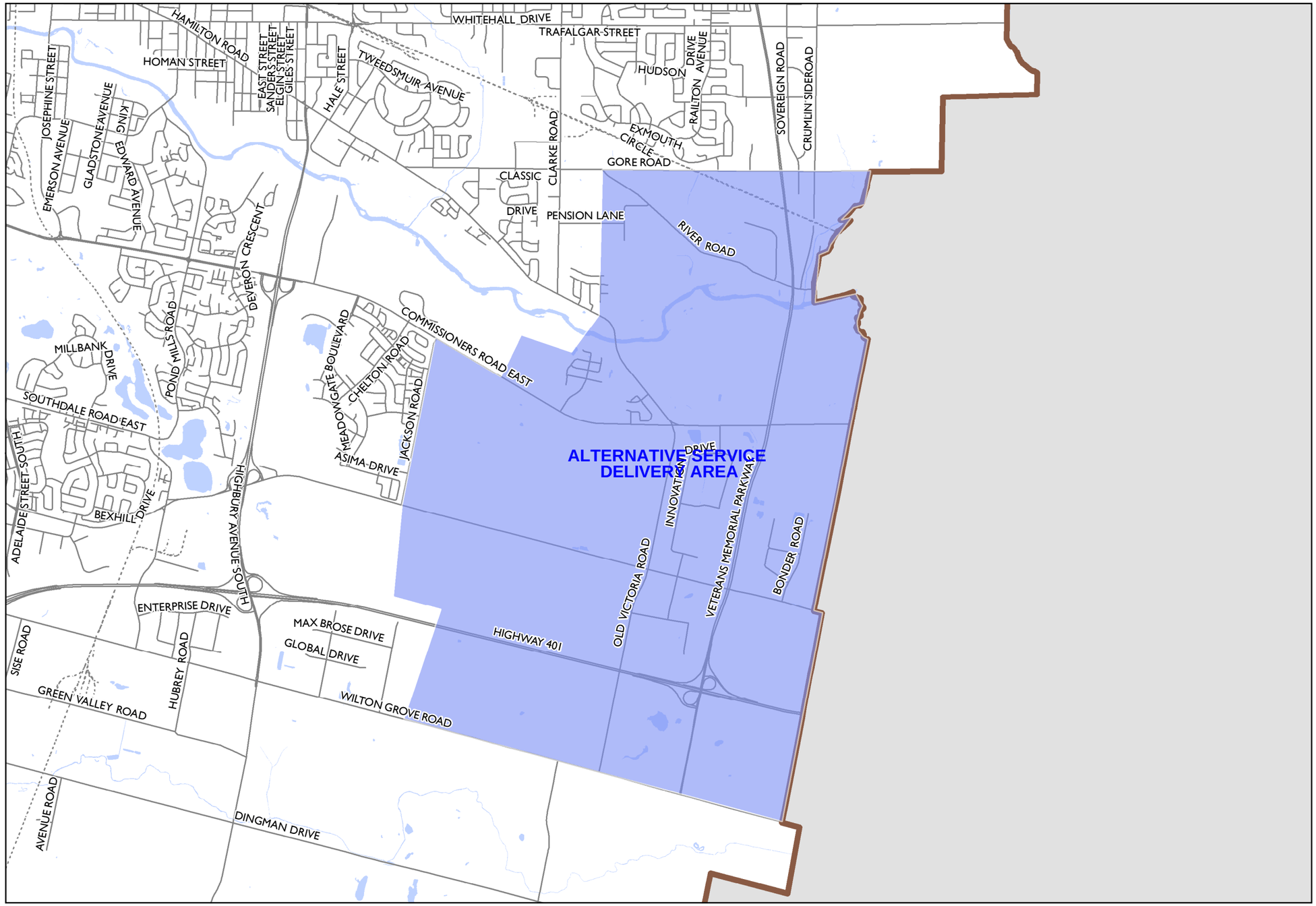
FILE LOCATION: I:\GIS\163037

DILLON CONSULTING

PROJECT: 188035
STATUS: FINAL
DATE: 2019-02-20

	WEEKDAY						SATURDAY					SUNDAY		
	EARLY AM	AM PEAK	BASE	PM PEAK	EARLY EVE	LATE EVE	EARLY AM	BASE	PEAK	EARLY EVE	LATE EVE	EARLY AM	DAY	EVENING
EXISTING 2019	40	8	15	10	20	35	0	0	35	35	35	0	0	0
PROPOSED 2024	40	8	15	10	15	20	0	0	35	35	35	0	0	0

PROPOSED NEW SERVICE 2024



LONDON TRANSIT COMMISSION

5-YEAR SERVICE PLAN

LONDON TRANSIT NETWORK
ROUTE NUMBER: Innovation Park

- Alternative Service Delivery Area - Innovation Park
- Municipal Boundary
- Railway
- Waterbody

0 0.5 1 km

MAP DRAWING INFORMATION:
DATA PROVIDED BY LTC

MAP CREATED BY: KS
MAP CHECKED BY: DAK
MAP PROJECTION: NAD 1983 UTM Zone 17N

FILE LOCATION: I:\GIS\163037

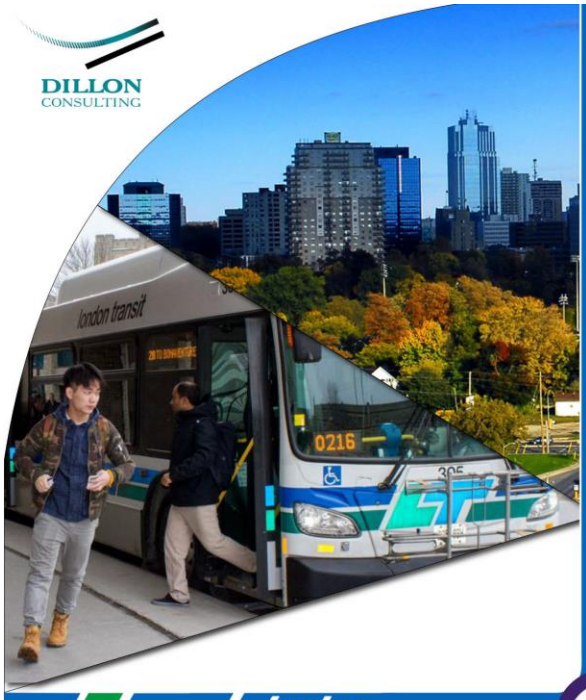
DILLON CONSULTING

PROJECT: 188035
STATUS: FINAL
DATE: 2019-02-12

	WEEKDAY						SATURDAY					SUNDAY		
	EARLY AM	AM PEAK	BASE	PM PEAK	EARLY EVE	LATE EVE	EARLY AM	BASE	PEAK	EARLY EVE	LATE EVE	EARLY AM	DAY	EVENING
PROPOSED 2024		ASD	ASD	ASD										

APPENDIX D

Public Open House #2 Boards



FIVE YEAR SERVICE PLAN

Public Open House

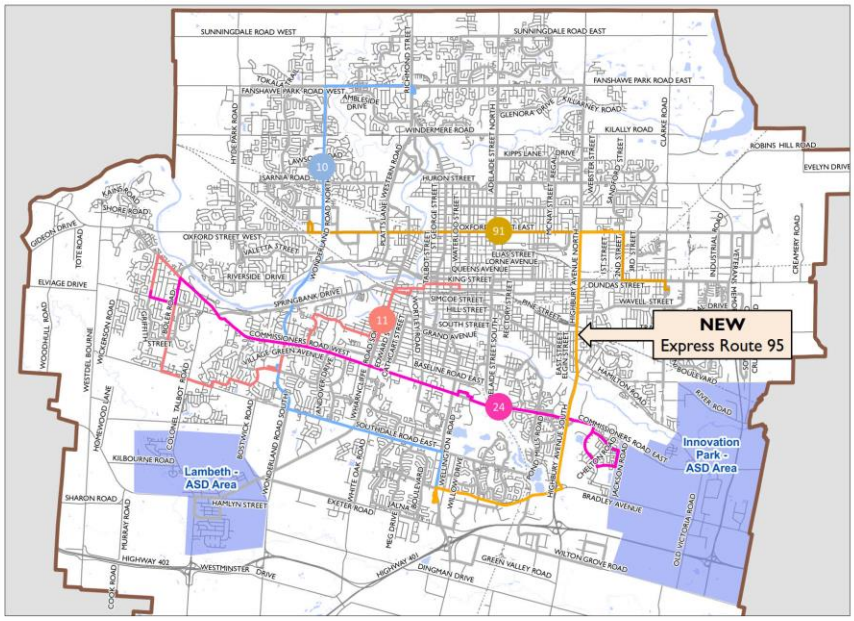
Study Purpose

- Review existing transit services and create a five-year plan to address customer needs and expand service in line with ridership growth targets in the London Smart Moves Transportation Master Plan
- Build towards future introduction of Bus Rapid Transit services

Public Open House Purpose

- Present draft concepts to the public and receive feedback
- Adjust draft concepts based on community feedback

Proposed Route Modifications and New Transit Services



Recommendation:

Provide better connections throughout London by realigning routes and introducing new services

Introduce cost effective service in low demand areas by introducing on-demand Alternative Service Delivery areas

Improve level of service for passengers by making strategic improvements to the frequency of service

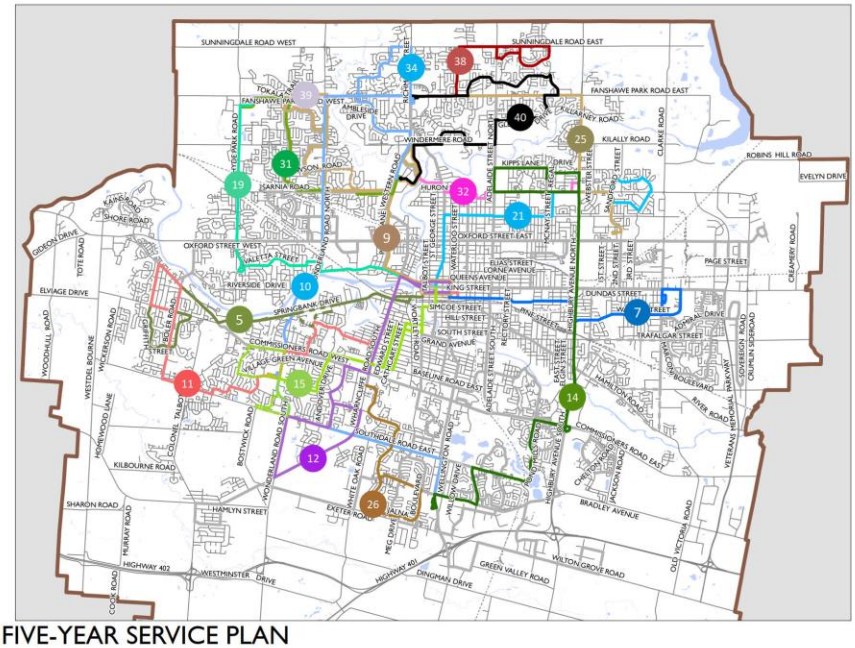
FIVE-YEAR SERVICE PLAN

DILLON CONSULTING

LET'S TALK TRANSIT

london transit

Sixty (60) Minute Frequency Improvements



Recommendation:

All 60 minute frequency services (one bus every hour) phased to 30 minute frequency or less over the next five years. Routes impacted include:

4, 5, 7, 9, 10, 11, 12, 14, 15, 19, 21, 25, 26, 31, 32, 34, 38, 39 and 40

Rationale:

Achieve transit mode share targets. Sixty minutes is often too infrequent for existing transit customers and unlikely to convince Londoners to use public transportation

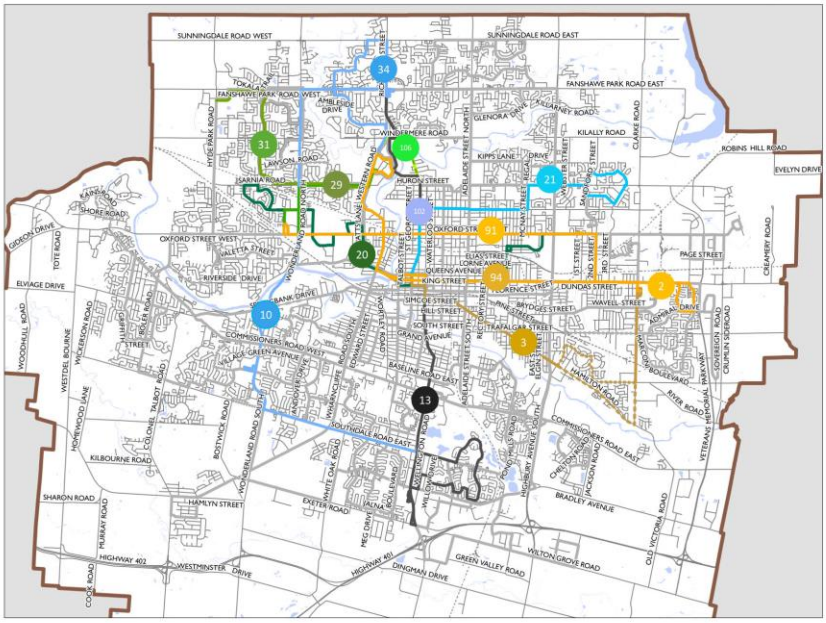
FIVE-YEAR SERVICE PLAN

DILLON CONSULTING

LET'S TALK TRANSIT

london transit

Demand Based Frequency Improvements



Recommendation:

Increase frequency on high ridership routes based on performance measures being met (phased in over the five year plan). Routes impacted include:

3, 10, 13, 20, 21, 29, 31, 34, 91, 94, 102 and 106

Rationale:

Reduce crowding and target frequency improvements on routes that will benefit the highest number of existing customers and result in ridership growth

Planned Service Modifications

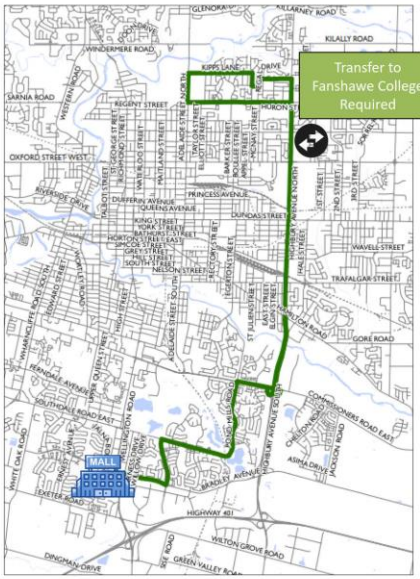
	WEEKDAY						SATURDAY					SUNDAY			
	Early AM	AM Peak	Base	PM Peak	Evening	Late Evening	Early AM	Base	Peak	Early Evening	Late Evening	Early AM	Base AM	Peak	Evening
Route 5	30	30	30	30	30	30	30	30	30	30	30	-	30	30	30
Route 3	25	12.5	12.5	11	22.5	30	30	30	22	30	30	-	22.5	22.5	30
Route 7	30	20	30	20	30	30	30	30	30	30	30	-	30	30	30
Route 9	15	15	15	15	30	30	30	30	30	30	30	30	30	30	30
Route 10	30	20	30	18.5	25	30	30	30	30	30	30	30	30	30	30
Route 11	30	20	30	20	30	30	30	30	30	30	30	-	30	30	30
Route 12	30	30	30	25	30	30	30	30	30	30	30	-	30	30	30
Route 13	15	15	15	15	20	30	30	15	15	20	30	35	30	25	25
Route 14	30	20	30	20	30	30	30	30	30	30	30	27	30	30	30
Route 15	15	15	15	15	30	30	30	30	20	30	30	30	30	30	30
Route 19	30	30	30	30	20	20	-	30	30	30	30	-	20	20	-
Route 20	30	15	20	15	20	30	45	30	20	30	30	45	30	22.5	30
Route 21	15	15	15	15	30	30	30	30	20	30	30	30	30	20	30
Route 25	30	30	30	20	30	30	30	30	30	30	30	-	30	30	30
Route 26	-	27	26	23	26	30	-	36	36	26	30	-	30	30	30
Route 29	30	7	10	7	8	10	-	-	35	35	-	-	-	35	35
Route 31	20	20	20	18	20	20	-	30	30	30	20	-	20	25	-
Route 32	30	30	30	25	30	30	-	30	30	30	30	-	30	25	-
Route 34	-	18	30	18	30	30	-	30	25	30	30	-	30	25	30
Route 38	30	30	30	30	20	20	-	30	30	30	0	-	20	20	20
Route 39	30	30	30	30	20	20	-	30	30	30	0	-	20	20	20
Route 40	30	28	33	28	34	34	30	30	26	34	34	-	34	26	34
Route 91	-	15	20	12	15	-	-	-	25	25	-	-	-	25	-
Route 94	-	20	20	15	-	-	-	-	-	-	-	-	-	-	-
Route 102	-	10	10	12	14	17.5	-	-	40	40	40	-	-	-	-
Route 106	40	8	15	10	20	35	-	-	35	17.5	17.5	-	-	-	-

Note: all values in this table reflect time in minutes between bus arrivals (example: 30 min = 2 buses an hour)

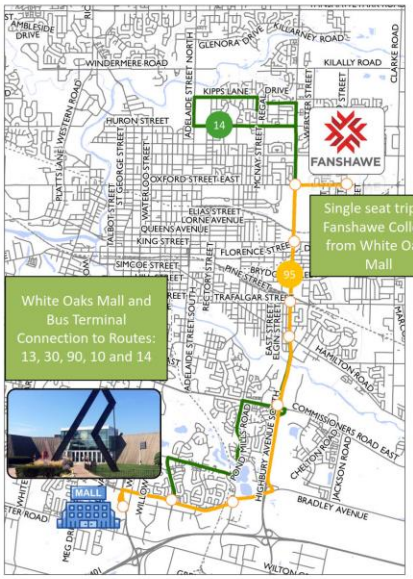
Increase in Frequency

New Highbury Avenue Express (Route 95)

Existing (2019)



Proposed



Recommendation:

Implement new limited stop express route between White Oaks Mall and Fanshawe College on Highbury Avenue

Rationale:

Reduce travel time by approximately 10 minutes per direction

Operate during weekday AM and PM peak periods initially every 20 minutes

Expand to other periods based on ridership and performance

Byron and Talbot Village Re-alignment

Recommendation:

Revise Route 24 to traverse Commissioners Road to Byron

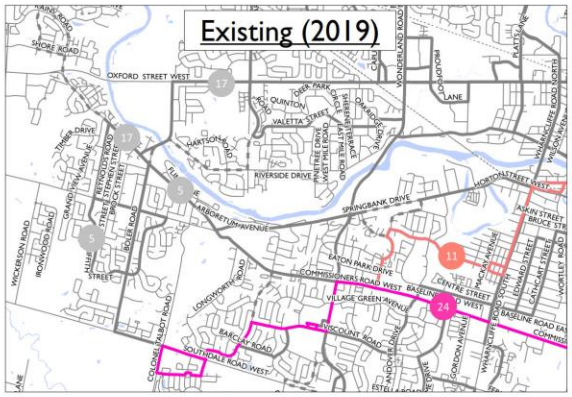
Revise Route 11 to connect Talbot Village and Byron via Southdale Road West and Boler Road

Rationale:

Provides more direct east-west service (contingent on the reconstruction of Commissions Road West at Springbank Drive ("Snake Hill")

Connect Byron residents to Victoria Hospital

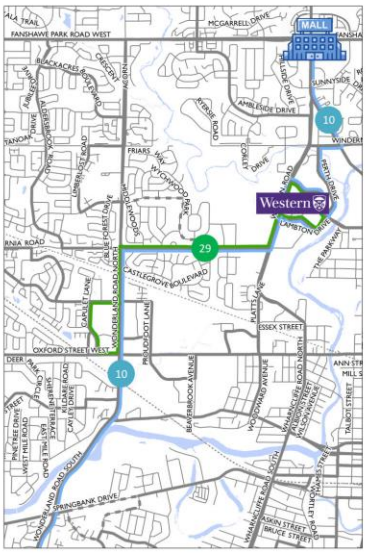
Existing (2019)



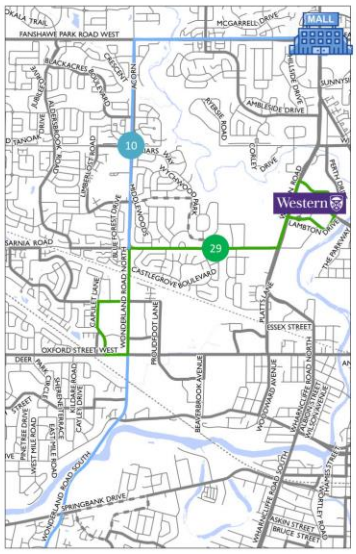
Proposed

Route 10 Re-alignment

Existing (2019)



Proposed



Recommendation:

Realign route to travel the full length of Wonderland Road between Sarnia Road and Fanshawe Park Road

Increase frequency on Route 29 to ensure there is enough service to accommodate high ridership on Sarnia Road

Rationale:

Provides service on Wonderland Road north of Sarnia Road

Provides more direct service to customers destined to Masonville Mall

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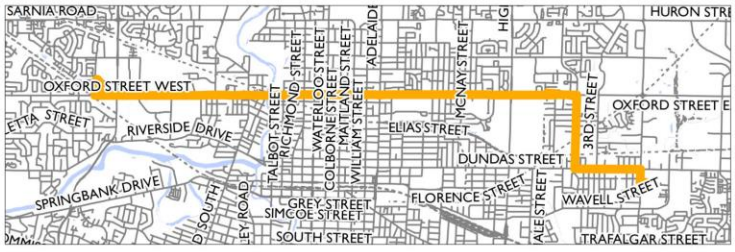
Route 91 Re-alignment

Existing (2019)

Proposed



Recommendation:

Extend Route to Argyle Mall via Second Street.

Demand-based frequency improvements are proposed during PM peak period

Rationale:

Provides direct connection to another major destination

Provides service to Second Avenue

Improves connections to future BRT services at Fanshawe College

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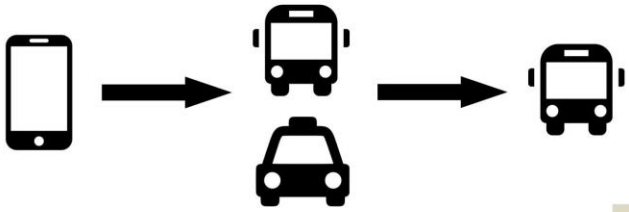
What is Alternative Service Delivery (ASD)?



How does it work?

- Alternative Service Delivery provides shared-ride on-demand service using flexible routes and schedules based on customer demand
- Travel times are typically reduced as the route is flexible and more direct
- In select ASD zones, you can make a direct trip and transfer at an existing transit terminal or higher frequency bus stop

Where do I board the vehicle?

- Stops within ASD zones are flexible and would be within a short walk of your home or destination

How do I transfer between services?

- A transfer would be issued if you are travelling between ASD services and a fixed-route bus

Distinguishing Characteristics

- Flexible routing or scheduling based on customer demand
- Use of mobile apps to connect supply and demand
- Use of smaller, more flexible vehicles
- Connecting multiple transportation services to complete a trip

How do I book a ride?

- Customers can use a mobile app or call a live customer service agent within 60 min of their desired trip to book a ride
- Enter your location and desired destination and a number of options will appear that include pick-up time and location and drop-off time

How much will it cost to take?

- Standard London Transit fares would apply

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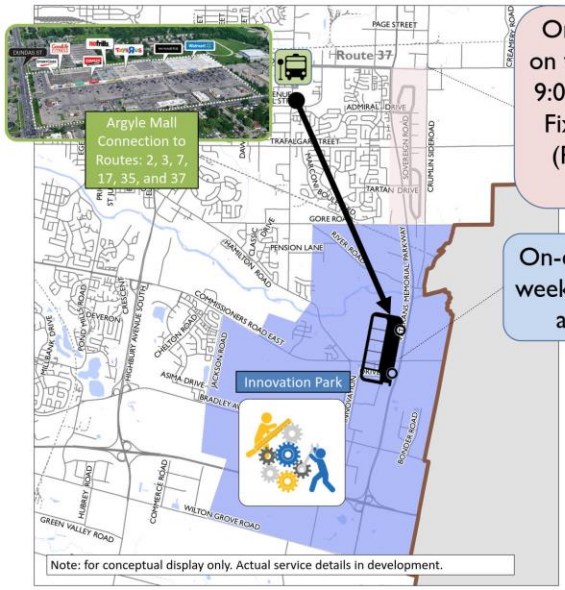
Route 37 / Innovation Park

On-Demand Alternative Service Delivery (ASD) Area



On-demand service on weekdays between 9:00 am and 3:00 pm. Fixed route service (Route 37) during peak periods

On-demand service on weekdays between 6:30 am and 6:30 pm

Recommendation:

Implement on-demand ASD service to Innovation Park, a large business park in south-east London to service employees working in this area (not currently-served by transit)

Provide midday service along Route 37 using on-demand ASD service

FIVE-YEAR SERVICE PLAN

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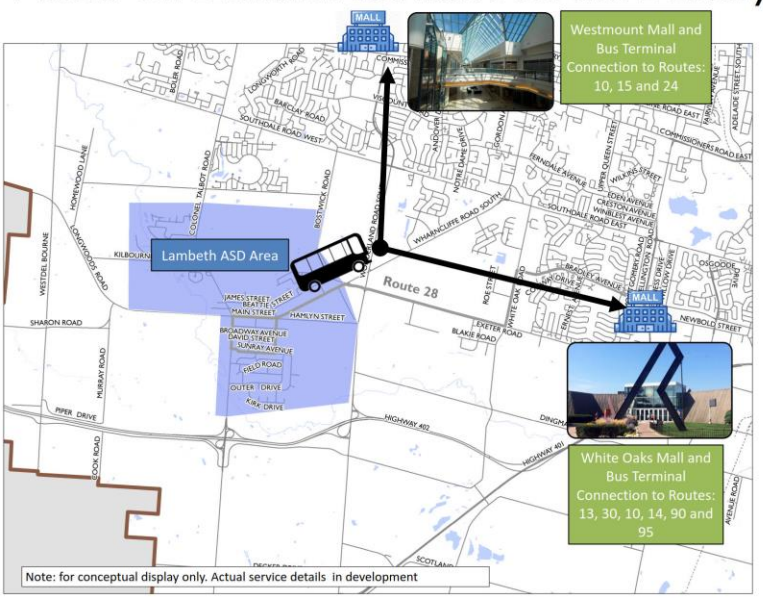
Lambeth

Assess On-Demand Alternative Service Delivery (ASD)



Recommendation:

Assess ridership performance on realignment of Route 28 (recommended for implementation in 2019)

If service is not meeting recommended service productivity standards, assess conversation to an On-Demand ASD service towards the end of the Five-year Plan.

Service Plan Feedback

In the table below, rate each of the service changes below

	Not applicable (This proposal does not affect me)	LOVE IT! (This proposal benefits me)	Okay (I like it, but it could be improved)	Could be better (This proposal negatively affects me)
Sixty (60) Minute Frequency Improvements				
Demand-based Frequency Improvements				
New Express Route 95				
Talbot Village and Byron Route Realignment				
Route 10 Realignment				
Route 91 Extension to Argyle Mall				
Innovation Park and Route 37 Alternative Service Delivery				
Lambeth Alternative Service Delivery				

FIVE-YEAR SERVICE PLAN

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Next Steps

- Compile and analyse feedback from open-house and on-line survey
- Develop phasing plan for service improvements over the next five years
- Finalize five-year service plan
- Draft and finalize report
- Present recommendations to Commission

Let's continue the conversation!
ltcserviceplan@gmail.com

To fill out the online survey visit: ***LondonTransit.ca***

Don't forget to fill out a comment sheet and place it in the comment box before you leave!

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FIVE-YEAR SERVICE PLAN

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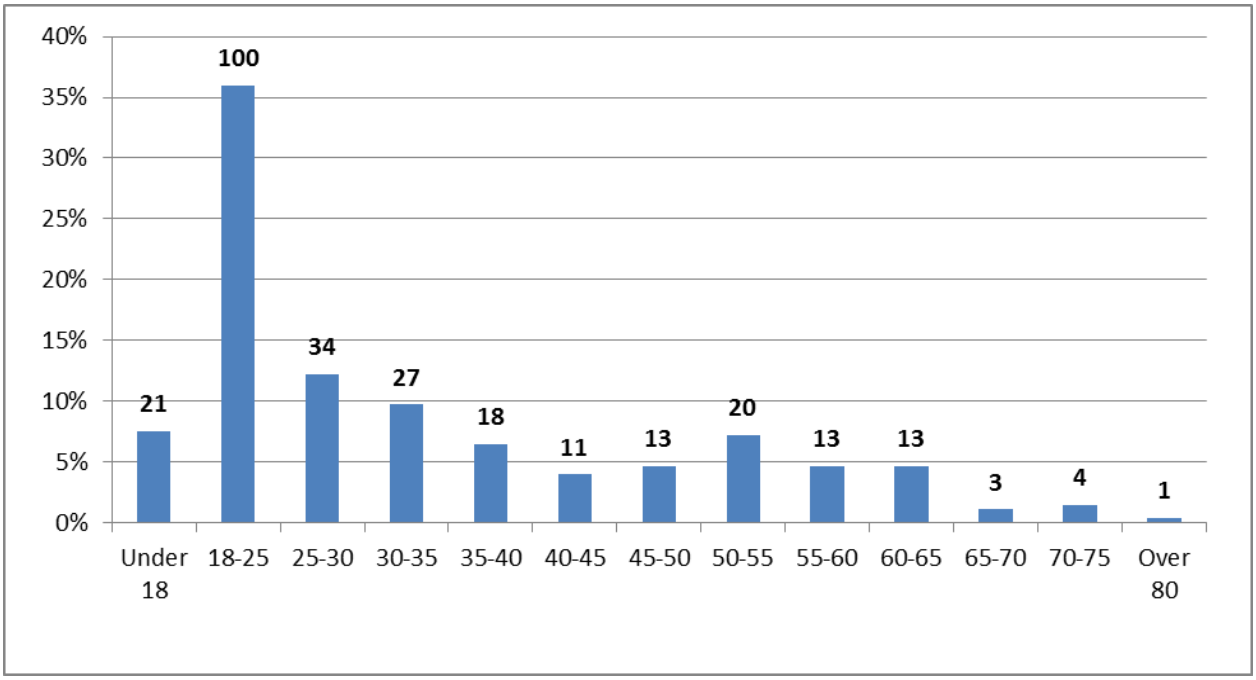
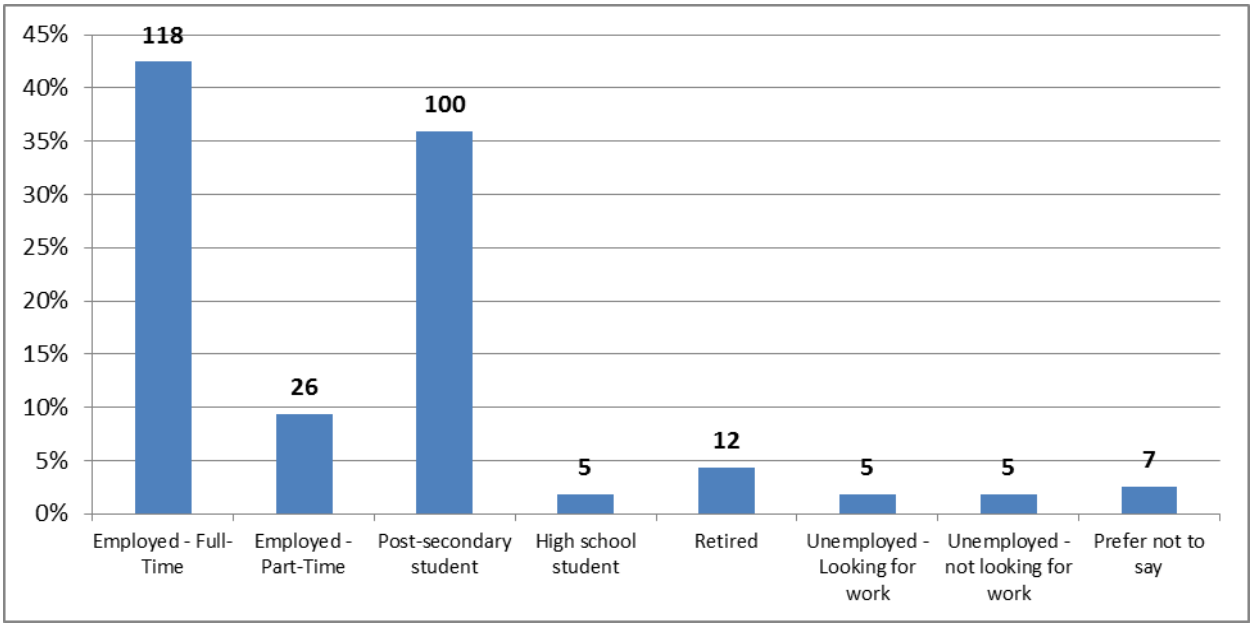
APPENDIX E

Public Open House #2 Feedback Summary

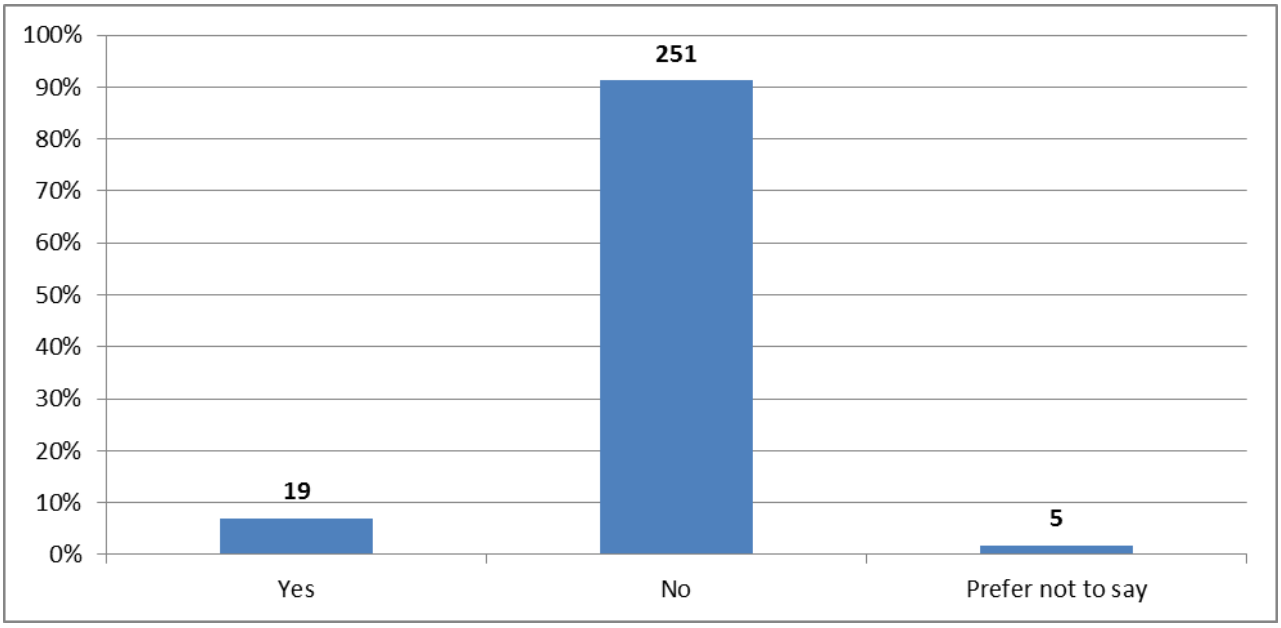
What age group do you fall under? (On-line Survey Only)



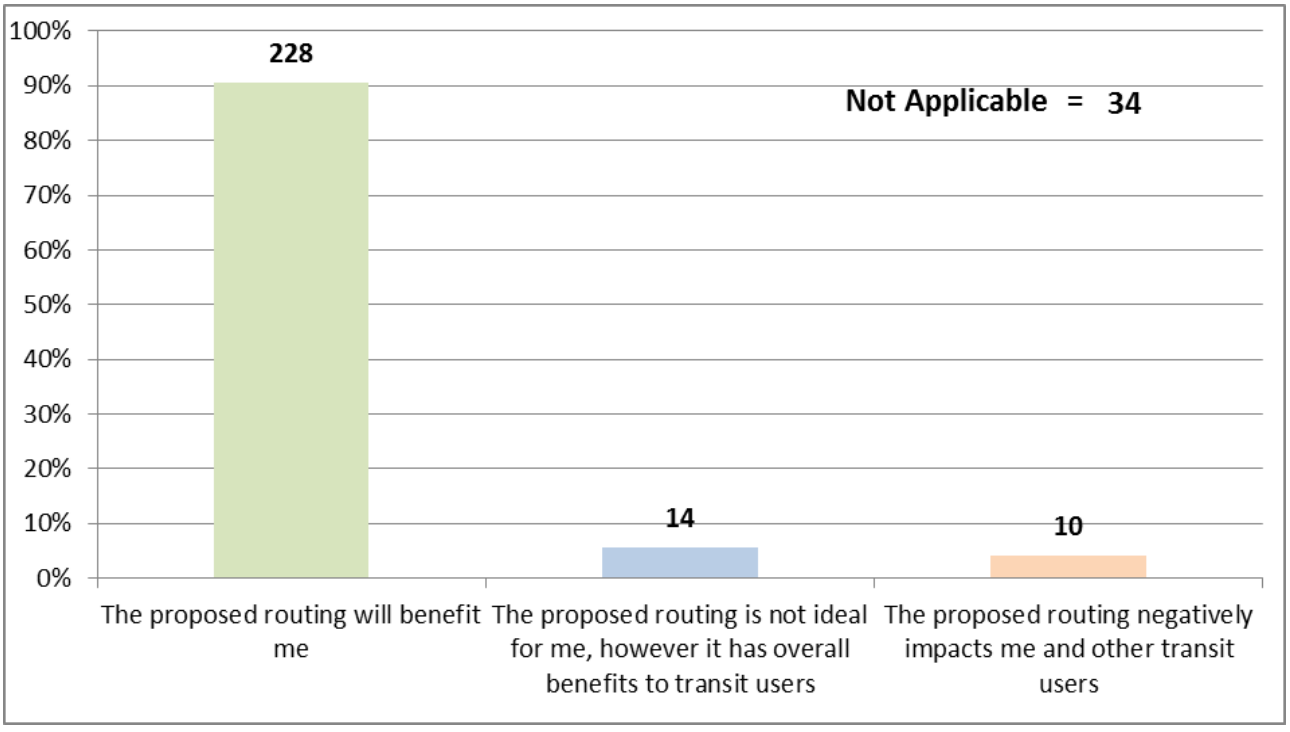
What is your current employment status? (On-line Survey Only)



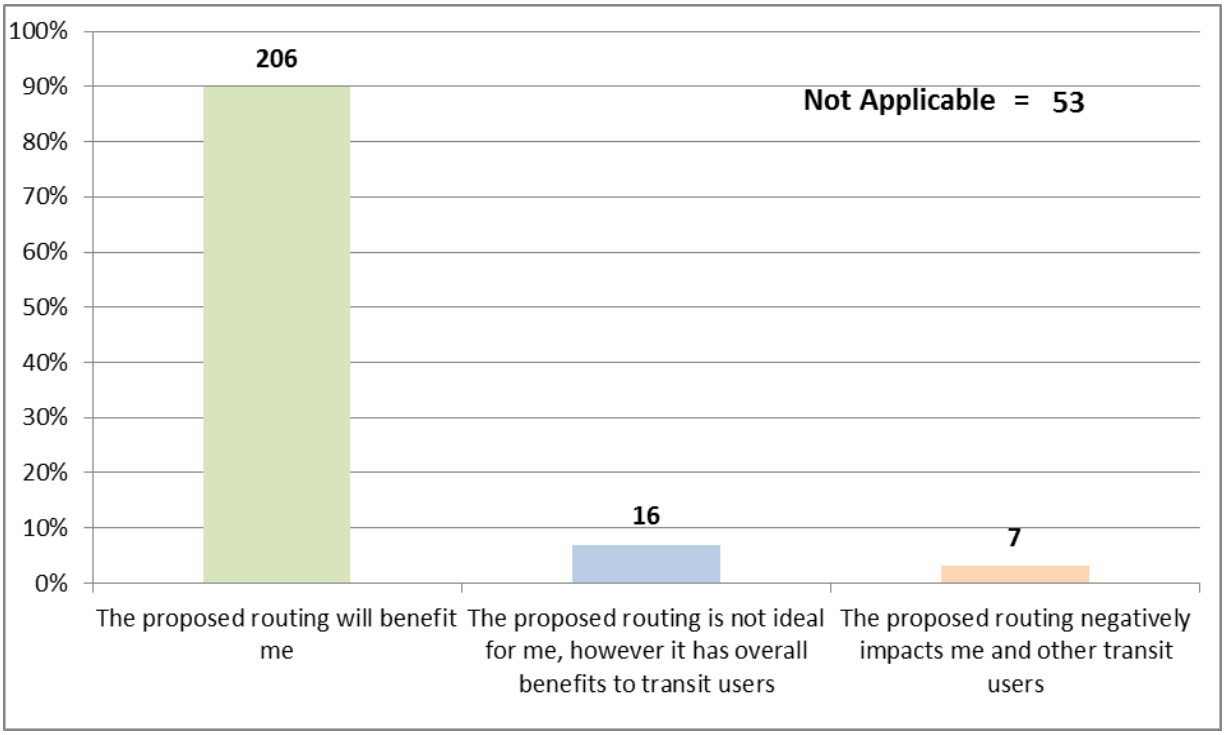
Have you recently (in the past five years) immigrated to Canada from a foreign country? (On-line Survey Only)



What is your opinion of improving all sixty minute frequencies on ALL routes?



What is your opinion of making service more frequent during high demand periods?



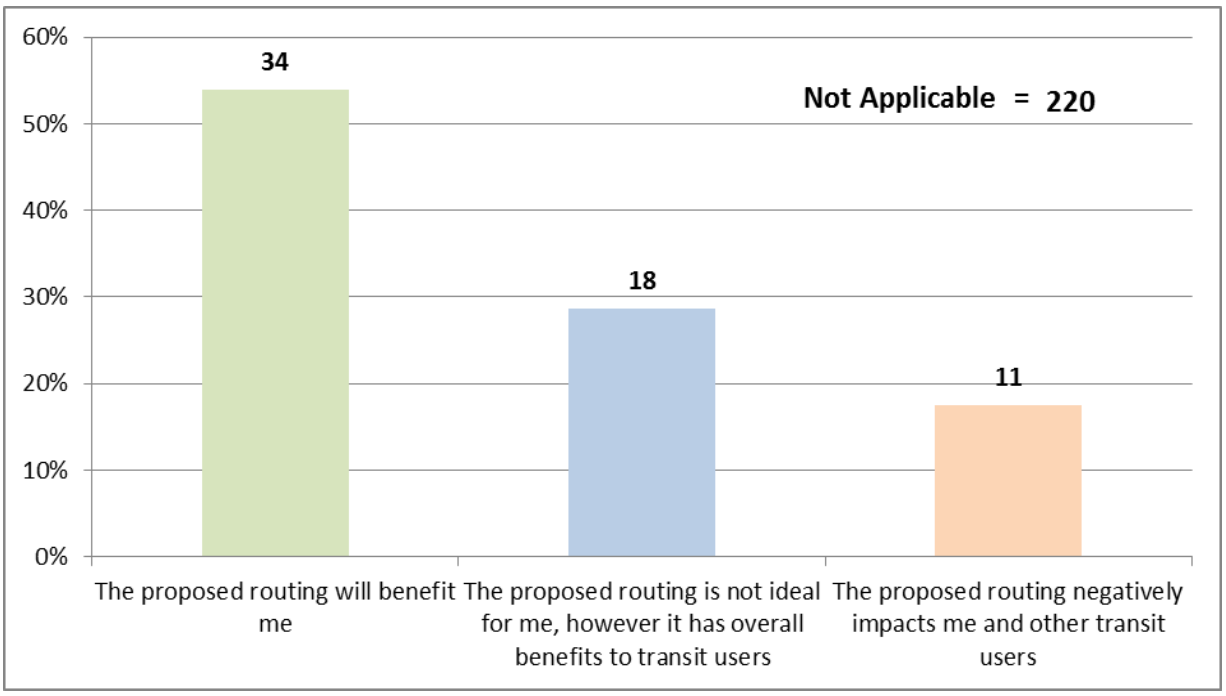
COMMENTS ON PROPOSAL

- 30 minute or less frequency for all routes is an excellent idea!
- 30 minutes or less waiting time will encourage me to use transit more frequently. Waiting to transfer buses at the more isolated spots at night as well as standing outside (anywhere) in bad weather longer than that discourages me from using public transit.
- 30 minutes to wait for a bus is too long especially if it's already running late buses should go by every 20 min during peak times.
- "As long as the buses can be reliable with the increase in frequency.
- I've noted that some routes that have increased frequency are not reliable therefore you are unable to plan your trip accordingly.
- Cool, none of the routes being improved are routes I take, with the exception of Route 20, which you're only looking to improve during Sunday peak hours? Honestly, LTC, there are no words to describe how much I hate you.
- depending on what bus route is in my area, it is hard for me to comment
- For some routes, yes 60 minutes is a long wait...but for other routes, such as your route 24 proposal, it is better than no service at all. 24 is planned to have no service after 7pm and less Sundays, yet is servicing Summerside subdivision (the only bus in that whole area) and Talbot Village (you try walking the long distance into Byron to catch 5 or 17 after 7pm, or even longer if you live along Colonel Talbot). That and it's nice to take a bus out in summer to watch baseball and soccer at City Fields! Make the bus 1 hour after 8pm till 11 pm
- Great! 60 minutes is too long, even on Sundays.
- "I believe busses should be even more frequent then every 30mins!
- I have lived in Montreal and their bus (not subway) bus systems are impeccable!
- They are frequent, reliable and are close to many different locations.
- London is a continuously growing community and I believe there should be more busses! This will encourage people to bus even more, reducing car traffic, and overall reducing car emissions - trying to decrease the growth of global warming "
- I don't use these buses except for #21, which I don't think is ON a 60 minute frequency (formerly Huron Heights?). However, it seems like a good idea.
- I suggest within 20 mins.
- I think this would be great, I can't speak for all routes, but the ones that impact me (7 & 14) would be greatly appreciated. Often the 7 is the fastest way to downtown or to work (Via Argyle mall) but I have to make sure I catch a specific bus or else it's not worth taking at all.
- I welcome the increase in frequencies and believe it will encourage more people to use the bus service.
- I would love to see shorter time for 38
- If it actually works, it will be a good thing. However, nothing ever seems to stay on time or on schedule during peak hours for London Transit.
- If this can be implemented with workable transfers, it will be very positive

- Improve frequency on all routes. The 16 is too infrequent and the reason why I don't take the bus most days.
- Increase the frequency of Route 4
- Increased frequency would save me time from traveling from work, school and home!
- Increasing frequency is always a good thing for riders. I am especially excited about increases to Route 10, 102, and 106 during the evening, when Western students are often trying to move around the city for reasons other than class.
- It looks like the #26 will no longer have early morning service and the schedule is inadequate for rush-hour (peak) times. The proposed change of route #26 to the #93 express effective September/2019 negates this plan. The reduced time for the #10 helps a bit but it still is not as frequent as it should be for peak times in the morning.
- It will benefit me only slightly for the 13 on Sunday but i live in an area that has good transit for my needs.
- Main busses like the #10 should run much more frequently than every 30 minutes. Every 15 minutes at the very least would be ideal for people looking to get across the city more efficiently.
- More frequency is better, but I think 60-minute service can still make sense for things like early morning or late-night service.
- more frequency on 32 in weekday AM
- More frequent busses is always better.
- My routes are all 30min or less, but improving the rest of the system is a plus!
- "Past midnight, too?
- "Rather than presenting a dichotomy between demand based frequency increases and increasing low frequencies, a more nuanced approach should be taken to grow ridership and provide social equity. Ridership growth elasticities are greater when increasing low frequencies. Therefore, a focus on ridership growth will direct service increases to both low and high frequencies to optimize ridership growth and productivity. In my brief look at frequency changes, Route 25 stands out as not seeing enough of a frequency increase and Route 12 perhaps has too much frequency increase. Of course, I hope to see data drive this decision-making.
- I'm confused about frequency increases on Route 21 but not Route 15 during Sunday Peaks when they are the same route.
- Route 1 should also be improved
- Should be increased more than what is shown for the 10 and 4 if possible. Maybe the 26 too.
- Some of the more busy routes should be more frequent, especially in the evening.
- Sounds great. I'm much more inclined to take buses that run frequently.
- The 14 Highbury should run more often. Me waiting 30 mins for the next bus is not beneficial especially when I ride the bus everyday I see how busy it is.
- The response options here aren't really appropriate for the question. Anything you can do to increase frequency and reliability will generate greater ridership and better serve existing customers.

- Waiting for a bus for an hour, especially because this is a transfer, is ridiculous. The Medical clinic on Springbank area requires this. Will be much better if this is changed to every 30 minutes.
- Would definitely love increased service on the 10 and 9!
- Would like to see some frequencies improved at peak time, too. For example, bus 19 is often standing room only.
- Yes this will help Western students get to class on time and not having to worry about full busses and/or hoping to have university buses come.
- Yes, there should never be a time with service > 30 minutes

What is your opinion of the proposed route changes in the Byron and Talbot Village areas in southwest London?



COMMENTS ON PROPOSAL

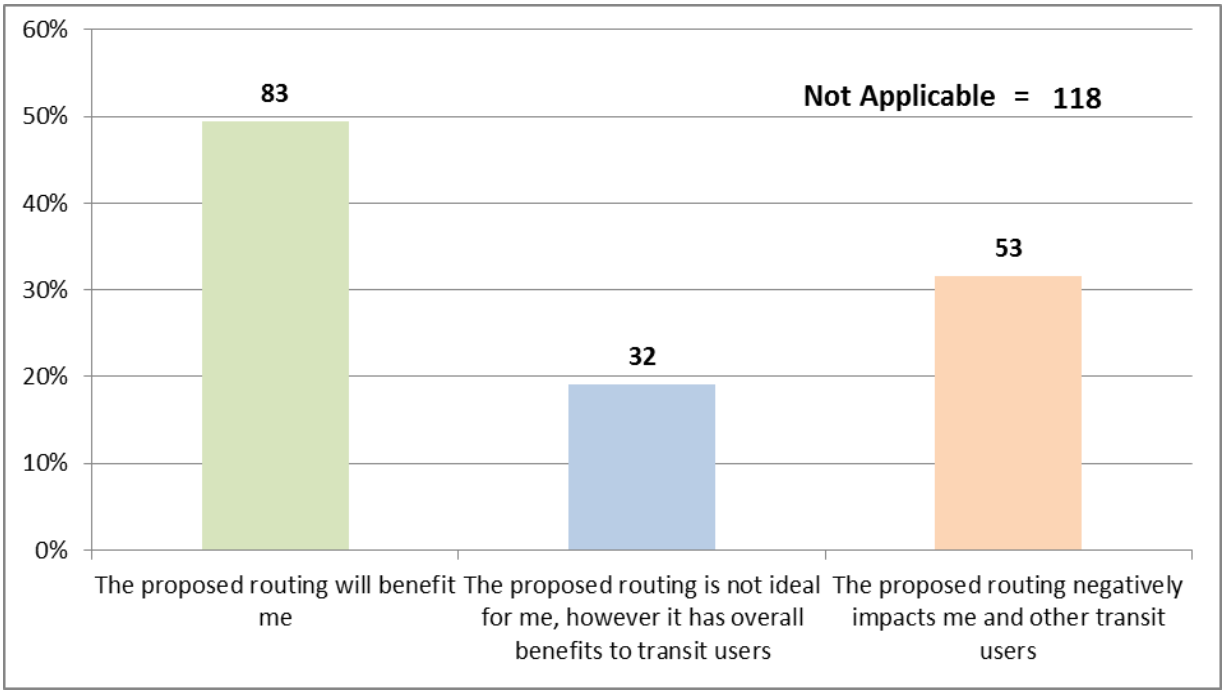
- Before reconstruction of Snake Hill, reroute 24 bus to Springbank and Westmount Drive
- "Byron already has one of the lowest rates of ridership productivity in London. I believe, extending two routes to the area will have a significantly adverse effect on overall transit productivity in London. Extending Route 11 in particular is concerning as its 20-minute frequency would grossly over-serve Byron and the Talbot Village area.
- An alternative that would better match service to ridership would be to extend Route 5 to Riverbend and extend one branch of Route 17 to Talbot Village. Routing could be as follows:
  - 17A: Commissioners, Griffith, Boler, Riverside
  - 17B: Commissioners, Boler, Southdale, Talbot Village loop, Southdale, Boler, Sanatorium

- I don't believe extending Route 24 to Byron provides the ridership benefits that justify the increase in service hours.
- If this alternative is not appealing, maintaining the status quo would be far more preferable to the draft plan.
- On two related notes, service in Riverbend should be extended to the Riverbend and Oxford intersection to service the high density node that is developing and the growing neighbourhood to the south. Doing so would have a negligible effect on time travel.
- Second, if the above proposal is not followed, Route 17's branch loops should be modified. Currently, there is a time travel imbalance between the loops creating inefficient service provision. Also, the A loop which operates during all time periods largely duplicates service while the B loop in the rapidly developing Riverbend area only operates weekdays. To address these two issues, The A branch should service Oxford, Sanatorium to Riverbend while the B loop services Hyde Park, Riverside, Griffith, Byron Baseline, Boler."
- City money is better spent on more buses and better connections to get from point a to point b than it is to implement bus rapid transit the near cost of implementing it is outrageous never mind the continual maintenance costs!
- Commissioners Road E is already heavy enough with traffic. We do not need more noise, pollution and traffic along the proposed Route 24. The people who live in this area were not consulted about these changes.
- I am a Transit Rider via S London, but I think if the survey asks the public where they think would be a good Idea to ask other transit riders where they should have Transit placements.
- I don't live in this end of town but I think many in those neighbourhoods would appreciate this change!
- "I like that there would be more buses running to Byron. I normally avoid taking the bus to Byron, due to the leak of service. I am sure Byron's Residents would be happy with the improvements.
- Route 11 proposed seems to be not to be that efficient with a big loop on Route 24. A friendly suggestion. How about:
    - Route 11 does the Route 24 west leg, (would be cut off with the reroute), ending in North Talbot with the option to extend south to Lambeth in the future.
    - A new route could be created. It would do the proposed Bryon leg of Route 11, run along Southdale and does the Westminster Park leg of Route 13A. Route 13A is the last remains of Route 13, after BRT is in service. This new route could be nice extend of Route 13A. Would also connect some major shopping districts together and better service the Bostwick Community Centre for south Londoners.
    - Route 10 be rerouted off Southdale (between White Oaks Mall and Wonderland Road) and on to Bradley Avenue (after the section between White Oaks Rd to Wharncliffe Road is built), or Exeter Road, or combination of both. This would allow transit services into a built up (and soon to be built up) areas, while still providing an efficient route.
    - Route 13 would lose its Route 13A leg, making it more efficient for people travelling between Downtown and White Oaks.

- I support direct access from Byron to the hospital, but this is not a route that I take.
- I think this is a wonderful improvement as it will make Byron much more accessible. Having grown up in Byron I always noticed that the transit options were limited which caused me to have to make at least 1 transfer when my destinations were either in the north or the south of the city.
- I'm building a house on the 11 route and hope it will still come as often so I can make it to work in the morning. We built in this area because of the bus route so please keep it!!
- It is great to have a service from Byron to Westmount
- It needs to go to Victoria hospital. What is a single seat trip?
- On the previous change Depending 2018, Route 11 was supposed to be the fastest route from Westmount to downtown. With traffic on Southdale the bus is going to be late.
- Providing access to Westmount mall to Byroners will be extremely positive
- Route 24 destination is Westmount, it will mean a transfer or a long walk.
- Route 11 is already on a long route and it takes forever. It's always late, there never seems to be enough buses on the route and adding more to that would be create an even more negative outcome.
- Route 24 not going to Westmount mall would greatly affect me for shopping and my daughter getting to and from work.
- The new route is the reason why I will be forced to buy a car as I will not be able to get to my 8:30 morning class on time. The commute is already and hour and a half due to the delays, not the fact that the bus will be even further from my neighbourhood gravely impacts my family and I's transit. My brother won't be able to do extra-curricular activities and I won't be able to get to western on time. The Route 5 bus is always at minimum 20 mins late always and I always miss the Route10 to get to Western and I have signs of arthritis from waiting in the cold so much just so that I am able to get an education.
- "This does absolutely nothing to solve the problem of getting from Byron to White Oaks or even to work at Wonderland/Southdale area. We desperately need a bus that goes all the way down Southdale. For kids who are too young to drive or don't have a car available, but are old enough to work, their ability to get to where the jobs are is seriously hampered. There is such a business hub at Southdale/Wonderland now but the bus continues to turn and go to Westmount Mall, where there is hardly anything except a bus exchange. It's almost faster to walk all the way to that intersection than to take a bus and do the transfer to go back down Wonderland. Plus the addition of the new community center on Southdale - we are cut off from it by the bus service! This makes no sense and shows really poor planning by LTC.
- Getting to White Oaks Mall are is also just ridiculous. Why not have a bus that goes from one end of Southdale to the other? With so much more housing along the west end of Southdale AND the new community centre/library/etc. at Bostwick and Southdale, this really needs to be improved."
- This would provide way too much service to Byron; however, it's good to connect Byron and Talbot Village.
- "We need bigger busses especially in the university areas.

- Why not just leave 24 the way it is planned out for 2019, but increase the times in 2019. Even if Route 24 goes to a 1 hour run until 11pm, it would be better. No bus service to subdivisions and business's after 7pm is not right. Route 5 and 17 already service Byron, so having 24 continue to service Talbot Village, and swing into Westmount Mall is great. Who is to say Snake Hill will get an overhaul and if so it will take a while to reconstruct.
- Wickerson Road should be served
- Would be good to extend route 5 west to new subdivision off Wickerson Road. Very long walk to get to bus.

What is your opinion of the proposed route changes along Wonderland Road and Sarnia Road?



COMMENTS ON PROPOSAL

- A disaster for those traveling south of Oxford from UWO like me. Essentially will stop me using this route from Westmount Mall to UWO or Masonville. Let Route 29 run a circle leave the long distance 10 route to go thru the main populations Masonville UWO Westmont White Oaks
- Who on earth thought this was sensible??a mad idea - will lose customers"
- A lot of students use bus 10 from white oaks and Westmount and changing the route will harm them if they want to go to Western.
- As long as the bus frequency is the same, it would be beneficial for me; because I live in the south end and work at Masonville.

- Does not impact me if I still have a reasonably timed route from southeast London to University Campus of LHSC. (Keep Richmond #6 from Victoria Campus of LHSC unchanged.)
- Extending Route 10 to Fanshawe Park Road is an excellent improvement providing service to the Archeological Museum as well as to people living north of Sherwood Forest Mall. In time hopefully there will also be service for people living on Sunningdale Road.
- Having the #10 bus not be nearly as frequent as the 29, means that western students living in Westmount will have to make transfers (onto the already overflowing #29 bus) and be forced to wait nearly half an hour for a #10 bus to take them home. If the bus transfers do not line up, this change will negatively impact many students who live past the Wonderland and Oxford area.
- "I believe that having the 10 not enter the University is critical to people who are trying to get to the mall!
- I work at the mall and have to leave an hour and a half early so I can get to work on time!
- With it not crossing the university there are less traffic lights it has to wait on and less foot traffic to wait around for (because university students don't always follow the pedestrian rules - I am also a university student so I am not trying to be condescending)
- Overall, I believe the change to the 10 will be very beneficial "
- I do like the fact that there will be a direct bus on Wonderland Rd N to access businesses at Fanshawe/Wonderland.
- I feel the biggest problem the 10 faces is when it is traveling towards Westmount Mall. I think there should be an express bus that has limited stops along Sarnia and some on Wonderland (where the 29 goes) to make sure those who can take the 29 actually do take the 29. It is inconvenient for me and others in Westmount to miss getting on the 10 because students that live along Sarnia take the 10 instead of the 29 (causing the bus to drive past me at the bus stop because it is too full). However, the proposed route would further inconvenience me if I were to miss the connecting bus. I feel some of the long buses used for the 29 could be used for the 10 because there have been many times I see two long buses back to back with barley anyone on them.
- I get route 10 from the University to Masonville Place. How will students and people like me get to that Mall?
- I have used Route 10 to get to Masonville Place from campus before, however, it was often unreliable. I once waited over 45 minutes (and in the end, I gave up and walked) because the buses on Route 10 would reach Alumni circle, then turn around and go south instead of continuing north to the mall for some reason- I guess it was busy and more buses were needed to go south? Yeah, that was a pleasant experience, thanks LTC.
- I like that 10 will continue North on Wonderland, but it will introduce a second transfer for travel to school.
- I prefer that the 10 Wonderland route stay with the UWO if I'm ever at Masonville so I can properly transfer onto a 2 Dundas bus.
- I rely on taking the 10 or the 29 to school but I know it'll be edit others to be able to reach that part of Wonderland. You'll need to have the 29 much more frequently on the weekends

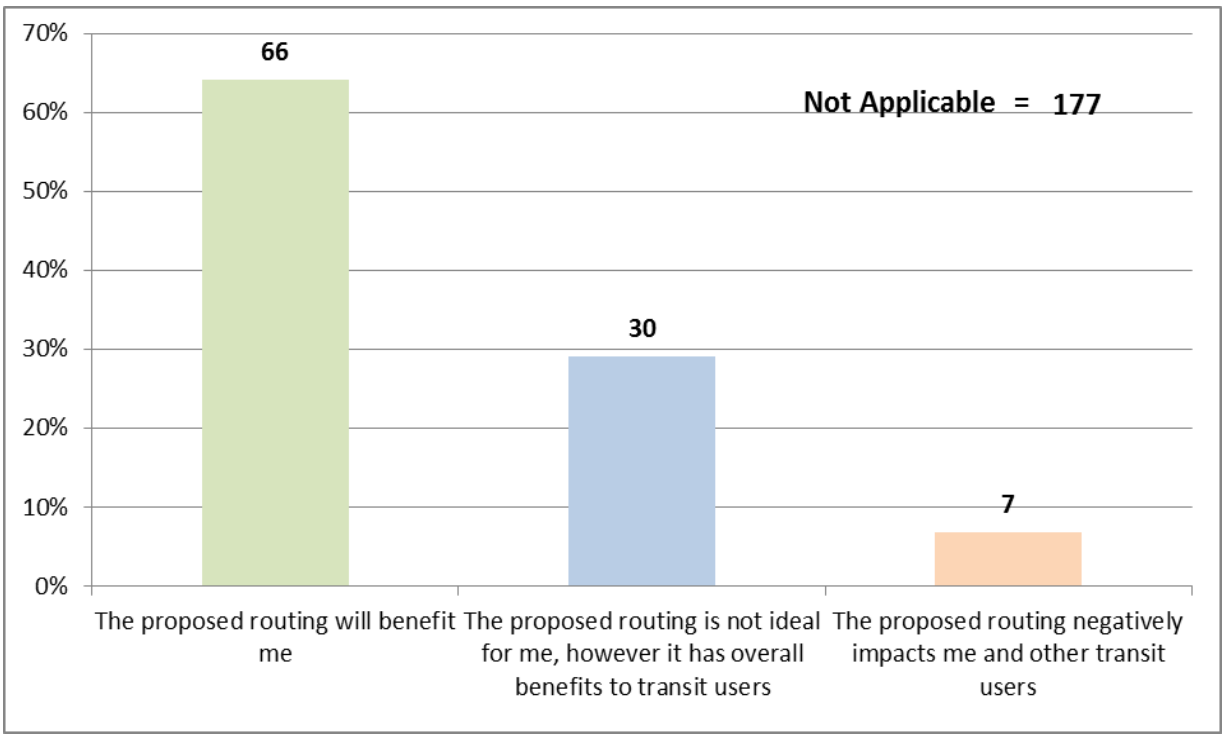
because students who come in on the weekends (master's or PhD students) need a bus to get them there.

- I take the 10 to get to Masonvile everyday afterschool to get home
- I think that it would be a great idea to have the wonderland bus route go all the way up Wonderland Rd - long time coming.
- I use the 10 to travel from Masonville to Western University and it is one of few routes that goes into campus. With the bridge always being under construction I am only able to take 34 and 10 currently and their frequency is not ideal. Changing this would mean that 34 would be the only reliable route.
- I will lose my direct route from Western's Campus to Masonville Place and would severely limit my ability to travel north of campus. I would chose not to go to the mall if I had to transfer busses. This is a very poor change for Western students and will have a negative economic impact to the mall.
- I would need to find another bus to go to Masonville from Western in the case the bridge closes again and the buses are rerouted
- If the 10 doesn't stop by Western, then there will be one less bus taking students from Alumni hall to Masonville Place. The 13 doesn't stop at Alumni hall, making it a not ideal bus during poor winter conditions and at night. We should also take into account that although the 34 still goes from Alumni to Masonville, it has a much longer route than the 10 which makes travel time longer.
- If there are no changes prior to what is shown on the proposed map, this would be beneficial. It is the only bus. A bus that takes Southdale and Jalna residents to the Southdale and Wonderland area. Additionally, a bus route that goes from white oaks mall to Masonville Place would be great
- if you live at wonderland and springbank, thats awful if you go to western
- If you want to change the 10 route like this, then the 29 will have to run year round or else I will not be able to access Western university on weekends/during the summer. Kind of a huge yikes right there.
- Is route 29 still not going to operate in the summer? Because then the 10 becomes one of the main busses to campus across Sarnia at that time and that should not be taken away.
- Is there still a direct route that will connect Western students (like those who live on campus) to Masonville Place mall? That's a necessity since the huge majority of them do not have cars and need to get to the grocery store/drug store/ etc. for necessities.
- Long overdue, break up 10/14 interline
- Many of our London university students use bus 10 it currently can get them from the university to any of our London malls this will impact our kids ability to take one bus to western from the west mount location it is a terrible idea.
- Many western students rely on the 10 to get to and from the university, having to transfer busses would make it more difficult for them to make it to class on time. It'll be dreadful for students to switch busses in the winter time considering they may miss their next bus and be forced to wait an additional 20 minutes out in below zero weather

- Not sure. What happens to the Whitehills bus? Not many access points along Wonderland from Sarnia to Fanshawe.
- OMG YES FINALLY! Why has it taken you decades to figure this out!!
- Plenty of students use the #10 to get to campus from Masonville because there is no other bus that goes completely up through campus to Masonville. 34 on goes to alumni and back and 13 since on detour now doesn't even go into campus
- "Route 9 (Or whatever Route is to run on Limberlost/Wonderland) and 10 would have far too much service duplication with this plan. There is demand to provide and east-west service on Gainesborough Rd. I think Route 9 should be modified to serve Limberlost, Gainesborough, Hyde Park - Hyde Park Power Centre.
- Blackacres Blvd service is not required as reasonable service coverage would be maintained and ridership is low.
- The other benefit of this routing is that it allows for Route 31 (or whatever Route serves Aldersbrook) to be extended to the foxy neighbourhoods north of Fanshawe Park Road and still maintain a direct Whitehills to Hyde Park Power Centre connection.
- The neighbourhoods framed by Fanshawe Park, Wonderland, Hyde Park and Sunnigdale require transit service. Additionally, the density and socio-demograhic make-up of the area indicate that conventional service would be appropriate. A Tokala Trail loop of the neighborhood would provide effective service coverage and efficient routing.
- So many students need to get to Masonville from western, it's already too crowded and buses rarely pass and when they do they are always too full.
- Students take the 10 to UWO. Going from campus to the mall to take the 10 bus would be inconvenient.
- "Thank you for providing coverage for all of Wonderland, it is severely needed.
- This also allows access to Wonderland and Fanshawe, which is currently terrible."
- The 10 is one of only two buses I can take home from pretty much anywhere in London. It's imperative to me that it goes through to Alumni Hall.
- The biggest change for the bus 10 is to give it the bigger one. There are more people who us the 10 not only to commute to white oaks but to also transfer to Byron. This bus should be the biggest buses rather than the tiny ones that always get filled.
- The Route 10 is a popular route that a lot of students take at Western to go to class at natural sciences and to Masonville Place. It's also used to go back home from Natural sciences as a lot of students live near intersections (Coombs Avenue for example). Without the 10, the 29 will be so full and the 29 always gets filled up a lot often.
- There are still no routes going west of Wonderland from downtown/UWO. I have a 20 min walk to reach either the Route 10 or the 29, and those are the closest routes for me.
- There needs to be a good system for connecting the routes at the Sarnia/Wonderland intersection. Since I won't be able to catch the #10 on Sarnia any more to go to White Oaks Mall, I'll need to be able to connect to it using a #9 or #29. That intersection is a large area and would require crossing two very wide and busy streets, so making connections would be tricky. A large-ish shelter could be provided on the northeast corner in the "park" that no one uses.

- There's already a lack of buses on Sarnia towards Western, if you increased service of the 29, then I would support this plan.
- These parts of the area are so busy already. To force people to make transfers onto other buses when it was already a challenge getting on the first seems to be adding more stress to the problem. Consider the fact that not everybody on Fanshawe Park Road wants to get to the mall specifically, and making that a priority over necessary needs such as getting to work/school seems unfair.
- This change doesn't affect me; however, I used to take the 10 frequently from Western up to Masonville. The loss of this route could negatively impact the student population. Frequency of the 29 would have to be increased as the 10 already has significant overcrowding during peak hours. Wonderland road will still have traffic issues affecting bus on time.
- This change is fine as long as you increase the number of 29 dramatically. I can't tell you how many times I have waited over 40 minutes for a bus because they have all been full.
- This change will improve my quality of life.
- This drastically decreases the frequency between Western and Masonville which many students rely on to get to school or work
- This is a great change that will serve Wonderland north well and make Route 10 even more intuitive to use.
- This is an awful idea buses going to the university on route 10 and 29 are already consistently full and leaves many students unable to get to class on time, especially during the morning hours. This change would worsen this issue even further.
- This proposed route would make it easier and faster for me to travel to Masonville Place.
- "This would make getting to and from work easier for me as it would add a second potential bus I can take we need the 10 back in Berkshire, as well as the university. this is how I've been able to get home without having to travel downtown late at night for over ten years, and this will be very troubling to anyone working/ living near us.
- Without the 34 and with the 13 on detour if the UWO bridge issues continue, it will be harder for many people to get from Masonville Place to Western. Myself, I am an employee of UWO, and I transfer at Masonville. This change doesn't seem favourable to people in my situation, unless other services are changed to include direct routes (such as the 34, the 40, or the 13). On the whole, though, this is great because it is a direct line rather than a circuitous route through campus, which slows buses down considerably.

What is your opinion of the proposed new express Route 95 along Highbury Avenue, noting Route 14 will be maintained along the existing alignment?



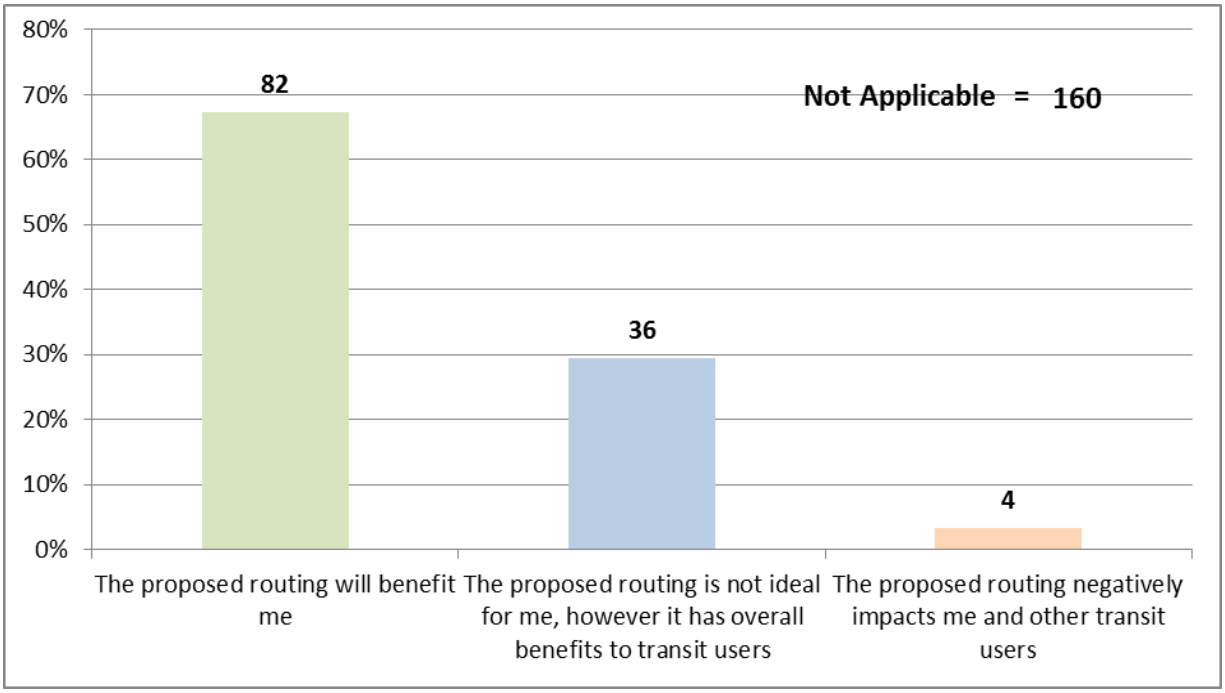
COMMENTS ON PROPOSAL

- Amazing idea
- As someone who lives fairly close to the Highbury corridor I welcome the addition of an express route, getting to and from the mall faster would be very handy, and as a former Fanshawe student I know that getting from the White Oaks area to Fanshawe was a huge pain-point for a lot of students as it could take forever.
- Connecting terminals is awesome! I'll be able to get to the mall faster from Arygle area if I can take an express from Fanshawe
- Do not see value in the addition of this route
- Fantastic!
- Getting students and others quickly and easily to shopping malls is a great idea.
- I am all for express buses.
- I feel it is good for mall employment. If our students can get from college or university directly from school to the mall jobs can be sought and kept with easy transportation between.
- "I have doubts that Highbury Avenue could support an express and local route. Adelaide St. has substantially more ridership than Highbury and an express-local service is barely appropriate there. Furthermore, Route 14 already operates as a semi-express for a portion of Highbury

providing minimal time travel savings. Finally, the area south area east of Wellington and north of Bradley is already one of the most over serviced areas of the city with terrible ridership productivity. Additional service would poorly match service to demand.

- On a related note, to address the over-service to the neighbourhood east of Wellington and north of Bradley, modify Route 13A to serve only Southdale, Millbank and Bradley. Appropriate service coverage would be maintained."
- It should be extended to go north on Highbury to Fanshawe Park Rd. Otherwise I have to either transfer to the 14 at Oxford or take the 14 from White Oaks Mall. Which would make it either more inconvenient or stay the same.
- Long-term this will reduce frequency on Route 14 which I use. If there is demand for an express bus on Highbury it would make more sense to have it go all the way north to at least Huron. The transfer to get to F.C. is not difficult and would only get easier with BRT.
- Same as Byron routes - won't affect me but definitely looks like an excellent route change.
- "This doesn't really affect me, but when I was at Fanshawe College, would be a benefit to me at times.
- A Suggestion for #14 (soon to be #10) and #16.
- #14 to serve Summerside and continue to White Oaks Mall via Bradley Ave.
- Then #16 to continue down Pond Mills Rd, via #14 route to White Oaks Mall.
- These two changes would help the residents of Summerside and the new large development on the east side of Jackson Rd, the City Wide Sportsfield and possible location of Southeast Community Center
- Route #16 would help the route to have a major anchor and the residents of Glen Cairn Hamilton Rd and Old East to get to White Oaks. Along with more options for people to there and Western Fair. "
- Where exactly would the transfer take place if travelling on route 14 (from Deveron at Commissioners) to route 95 (going to Fanshawe College)? It is not clear to me looking at your map as Highbury at Commissioners is an overpass.
- Will help with transit on 14 during peak periods
- "Will not be able to stop at Commissioners Road Interchange (as shown) unless a ""turn around"" is constructed to allow exit and immediate re-entry to Highbury (North and South).
- An alternative could be as follows: White Oaks Mall to Commissioners via Wellington then enter Highbury via Commissioners. This would provide direct connections from White Oaks Mall to LHSC Victoria Hospital to Fanshawe College. Run limited stop express."
- YES! Love the more direct route options!

What is your opinion of the proposed modification of Route 91?

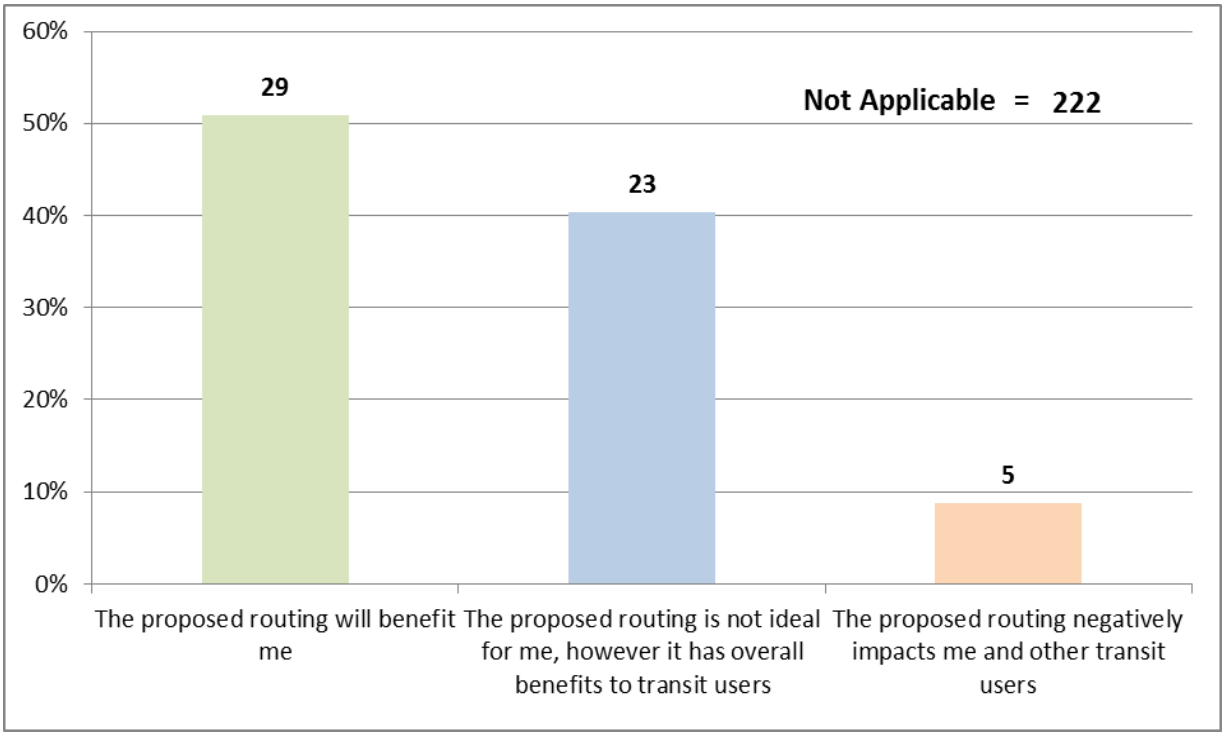


COMMENTS ON PROPOSAL

- Argyle Mall needs more service, so this looks great!
- Awesome!!
- For too long residents of First and Second street have had no bus service.. now at least you can shorter walk to a bus from First St to Second St. Business's need public transit to help them as well.
- Good to extend to major destinations like malls.
- I live in the East End and am very excited to see the LTC implementing and expanding more Express routes!
- I love these routes, I think they make it so much easier to get around town and they make my life easier. I think this route will be a great addition to the Dundas Express route that was a part of this year's draft plan, and the Highbury Express route you have also proposed."
- I take a bus on Oxford further west to Hyde Park, but even still this makes sense to connect an express bus from Argyle Mall to Fanshawe College.
- I wish this route was extended to the West. Us living West of Wonderland are very isolated when it comes to transit.
- it would be nice if the connection at Fanshawe to the airport made that trip fast and reliable.
- leave it to just going to Fanshawe its an express for a reason no need to extend it there's not enough people that need to go past Fanshawe.

- Not regarding the route itself, but it would be nice to see express buses operational on weekends -- even if with very reduced schedules.
- Perfect! Need this to run on the weekends as well!
- Quick access to Argyle is beneficial
- The extension to Argyle really appeals to me. Excellent choice
- This is an excellent idea! I can't wait to get to the Argyle Mall much faster!
- useless route to me if it doesn't go downtown
- What if BRT plans don't materialize?
- Why on earth doesn't it go to the airport allowing way access by students and others from west London
- Would like to see this route extend west to Hyde Park, and east to Airport.
- Yes, good idea - see industrial service comments

What is your opinion of the proposed new Lambeth On-Demand Alternative Service Delivery?

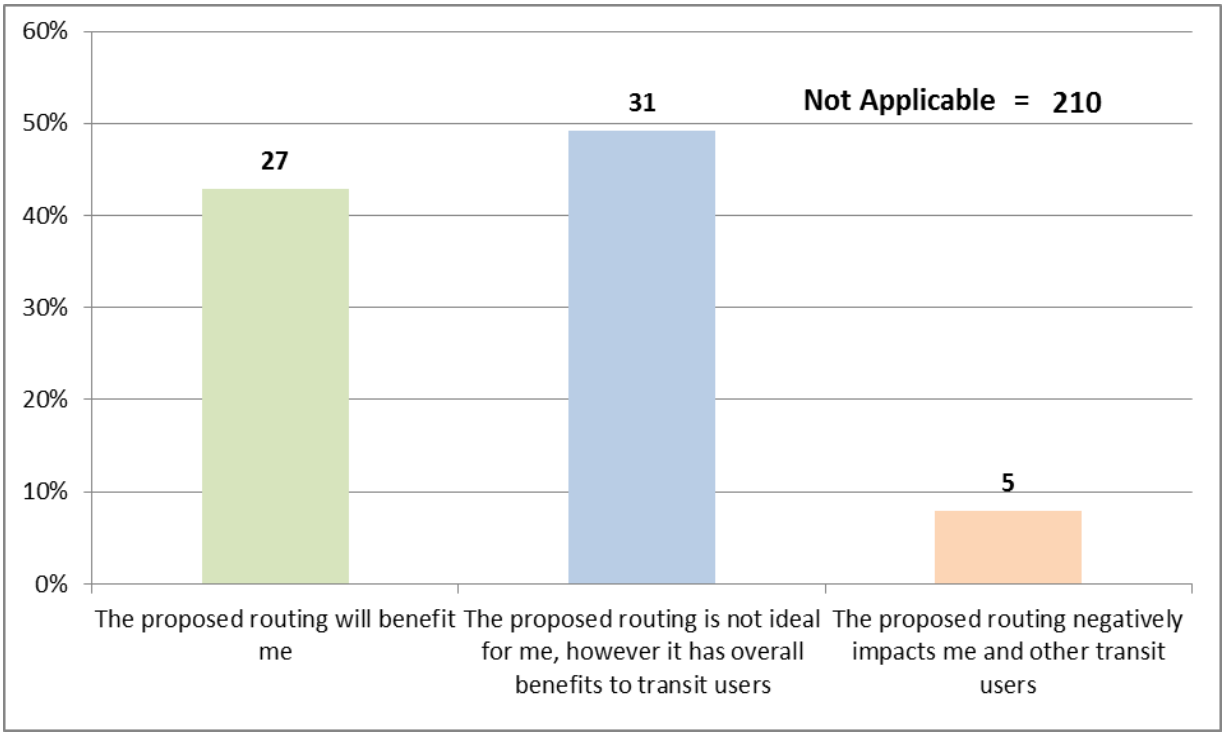


COMMENTS ON PROPOSAL

- But not everyone has a phone/smartphone
- Good to try a new way of delivering service to low density area. There will be a lot of growth along Col Talbot and in the Bostwick / Southdale area over the next 5 years
- I would need this route evenings and weekends, not during week days.
- It will be good to try new service delivery models in London.

- Not enough information to make an informed comment. However, I don't believe a 28 route is the answer.
- Service to White Oaks via Exeter Road should generate more riders
- The bus stop at White Oaks needs to be changed, so that riders can access all bus stops conveniently.
- The change expected to come into effect Sept 2019 will not be user friendly...no sidewalks at Wonderland/Wharncliffe, major north/south, east/west through way for traffic travelling through London, poorly lit, not pedestrian friendly when having to transfer at that 6 lane intersection; this is also the bi-pass route for highway traffic in the event the 402 is closed. Other routes that service the white oaks area could be altered to service the new builds along Exeter Road.
- This service should be available in all neighbourhoods in the London area that aren't served by a bus route, such as the Wickerson Road area.
- This would make it easier to visit family in Lambeth.

What is your opinion of the proposed new Innovation Park /Route 37 On-demand Alternative Service Delivery?



COMMENTS ON PROPOSAL

- Good idea - it will be interesting to see how it is used. Hopefully it will not be too expensive as the main cost is the driver!

- "I am excited that the LTC will be expanding to include more industrial areas in their routes. As someone who works in the Gore and Clarke area I am interested to see exactly where the stops would be and how the ASD service will work.
- I do have feedback that is perhaps better suited to the city, but even though the 37 bus would provide me with a quicker commute most days, I instead walk further to the 35 bus because there are no sidewalks to the stop at Neptune and Sovereign, and I would have to cross Veterans Memorial which is something that I would prefer not to do.
- So I am very excited to see exactly how this will shape up because, aside from me, I know there are quite a few people here who take the bus, and we often have students working here as well, and this would greatly benefit them and make their commute reasonable."
- I am not sure how the LTC will advertise this option to its consumers. It must be cost competitive to taking the bus at the standard fare.
- Love it! This corner of the city needs more access to transit.
- Many folks working in this area in industrial plants, etc., need to be on the floor ready to work for 7, so please consider starting the service earlier (possibly even as early as 6?) to help get these employees to work on time, so they can see transit as a viable alternative to having a car.
- Please increase bus availability in the industrial areas!
- "Service to industrial areas has been poor and LTC should attempt regular service first:
- Industrial Service Comments: Route 30 / 14:
    1. Route 30 should be split from the ridiculous one way loop (not favorable for riders) - Route 14 Highbury should be split at the south end to White Oaks via Newbold / Bessemer / Exeter (14A); Existing route via Bradley (14B)
    2. South part of existing Route 30 (south of 401) should travel from White Oaks Mall to Old Victoria Road via Wilton Grove, then north on Old Victoria to Hamilton Road, Clarke Road to Argyle Mall. Provides real connections to industrial
    3. Instead of having separate industrial routes (37), existing routes such as Route 2, 21 could be extended into industrial areas. Less transfers = more riders
    4. Route 36 should also terminate at Argyle Mall
    5. Route 35 is also a ridiculous loop and the area served by Routes 2, 7, 35, 36, 37 should be looking at re-routing, eliminating excessive looping (have a small loop at the route end so that 2 way service can be provided on most of the routes)
    6. Route 3 could be routed from Argyle Mall to Hamilton Road via Clark / Trafalgar (instead of Route 2A), then south on Hale to Hamilton Road to downtown. Other Route 3 routing will need to be looked at if this change is done"
- Should be a connection to White Oaks / Westminster Park / Pond Mills Area. To allow people in south London to easier access the service.
- This is a great idea.
- Why go on demand when so many people are now working out there? I know of 10 folks who could not get a job at Dr Oteker because of no actual bus service

Is there a service change priority that you feel was not addressed and should be added to the above proposals?

This question provided an opportunity for the public to comment on any service change priorities they had for the next five years which were not mentioned in the 2024 network plan. The following table summarizes the comments made by the public below:

Summary of Other Considerations from the Public

Response Category	Issues Identified
Absence of service	• Removal of Route 26 to downtown London (4) • Route 31 to Western University or the hospital (2) • Route 34, Masonville to Alumni Hall (2) • Route 31 on Limberlost Road (2) • Beaverbrook • Better access to Western University from Pond Mills • Better service to the airport • Cherry Hill to Western University • Dale Brain Injury Services – 15 minute walk • Early Sunday service • Extend Route 16 into Stoney Creek neighbourhood • Fox Hollow • Hamilton and Clarke industrial areas • Pioneer Village • Riverside West to Western University • Route 10, 13 and 34 to Western University • Route 10, 13, or 90 to Costco • Route 106 in the summer • Route 16 in the Summerside neighbourhood • Route 25 extension to Masonville Place • Route 25 to Edgevalley Road • Route 38 to Fanshawe Park Road and Adelaide Road for transfers to Route 16 or Route 25 • Route 92 to Parkwood Hospital • Service taken away from Sherwood Forest / Orchard Park neighbourhoods • Single-seat trip from Argyle Mall to Masonville Place – Express • Western University to Fanshawe connection • White Oaks Road
Bus shelters	• Absence of bus shelters (2) with snow removal • Bus shelters with lights

	• Heated bus shelters (2)
More frequent service	• Route 11 (weekday peak periods) • Route 31 • Route 38 • Route 4 • Route 90
Over capacity routes	• Need for larger buses – e.g. articulated buses (2) • Oxford corridor • Peak periods (generally) • Route 10 • Route 102 (3) • Route 106 • Route 14 (weekday peak periods) • Route 15 (weekday PM peak) • Route 16 (weekday base) • Route 2 (3) • Route 20 • Route 29
Route reliability issues	• Route 14 • Route 11/12 (Arrivals need to be more spread-out)
Span of service	• Riverbend on weekdays and evening • Route 10, 31, 38 and 39 earlier and later in the day • Route 24 evening service • Route 25 later • Route 27 and Route 29 to midnight and earlier on weekends • Route 3 later • Route 33 later and earlier on weekdays
Speed of service	• Route 1 – too many stops (slow) • Route 12 from Wonderland Road and Southdale Road to downtown – too slow • Route 30 – too slow
Technology	• Issues with the on-board next stop announcement system • Real-time information in-accuracies • Unavailability of mobile-application bus tracking system on Samsung devices

COMMENTS ON PROPOSAL

- Proposed changes to Route 1 in the Rowntree area were not addressed. I am against these changes as the proposed route will bypass my neighbourhood
- The 2A bus to Hale & Trafalgar, Argyle Mall and Trafalgar Heights should no longer go to the Hale & Trafalgar area that way I can transfer to a 35 Argyle bus alot quicker.
- Your stop announcer needs some edits such as when I'm on a 2A bus and it is at the Clarke North of Trafalgar bus stop, it says transfers to route: 2A while it should say 3, same goes for

the Trafalgar West of Clarke WB bus stop, another edit goes to the Clarke at Wavell stops. Clarke Road Secondary School does not mention the transfers unlike the SB stop, it should also include 2A. Dundas at Ontario/Quebec stops should add the transfers to route: 20. It should also include all the Express bus routes. Downtown is very vague. It should include the routes that are missing: 1, 90, 91, 92, 106.

- Transfer at Oxford/Adelaide is very difficult. For example, I have to transfer from a westbound 4 or 17 bus to go northbound on the 16 but the drop off is on the opposite end of the street which does not allow enough time to cross and get to the Northbound Adelaide/Oxford stop if there is a 16 waiting at the light. Concurrently, getting from the southbound Adelaide/Oxford stop to the eastbound Oxford/Adelaide stop is frequently marred by the rapid changing stop lights and the drivers who do not wait at the stop for the transfer. Either open up a new stop on the corner where the former Petro Canada is or be able to allow drivers to break at that intersection.
- There is no accurate bus monitoring service that I can access on my phone which is an older Samsung S5. I can look at stop times but they do not account for a bus if it is late or doesn't show up. Google Maps sometimes has this but frequently lacks it.
- Increase frequency at 12 and 4PM along the Oxford corridor. Too many students.
- 14 Highbury is frequently late."
- 106 service should be continued during the summer at a lesser frequency, especially if you eliminate #6 service to and from Natural Science, as people do go to the university during the summer. Western Road to and from the university is well serviced by #2, which runs frequently. Richmond is poorly serviced in the summer, even though there has been quite a lot of building north of the Western gates
- A bus down white oaks rd!
- Acknowledging that this isn't directly relevant, I have read about equity buttons or "please offer me a seat" buttons, that would benefit many.
- Any change that will decrease the crowding is positive to me.
- Any increase in capacity and frequency in the core routes will help every transit user including myself.
- Better service along Riverside in west and access to university
- Better transit from pond mills area to university. Currently the fastest route to the university take upwards of an hour and requires taking the 1A/B which is extremely inneficient due to the south st, colborne st, grey st deviation on north and southbound routes. There is also a required transfer. In the evening and weekend these transfers are very difficult to make both north and southbound.
- "Beyond reducing crowding, these changes could help stop busses that are full driving by riders waiting to get picked up (specifically the 102 northbound on Western Road during peak times).
- I would really like to see Route 2 included in this proposal for increased frequency, for the same reason as above. "
- Bus 15

- Bus routes such as 2, 102, 106, 20, and others, leaving and going to Fanshawe and Western during busy times are often full, so they cannot let more people on, and for some people that means waiting up to 30 minutes for the next bus to come, depending on where they are, and are trying to go. The 2 in particular is very rarely the double-length bus, and is jam-packed leaving Natural Science between 3:30-5:00pm. This makes time management very difficult.
- Buses need to run later for those that work late until at least 1 or 2am . and also not all students attend western university to use the mustang express service which means people have to spent more money on Uber's and cabs and the buses need to reach further boundaries in London, make them easy to get to , more frequent service in the winter . All bus stops should have bus shelters if the stop can accommodate a bus shelter . Bring back the bus stop at York and Richmond , Broughdale Avenue. Have an express Service to Fanshawe College and Western.
- Buses needs to be spaced out via scheduling. I live on Sarnia Road, and often times the 10 and the 29 shows up at the same time, with the second bus being empty most of the time as a result. Rather, havin proper intervals would greatly help with reduced wait times and also better utilize each bus more.
- Buses to the University (i.e. routes 2 & 102) are always run in pairs/three's. This means students wait for 15+ minutes in poor weather, then three buses show up at once. Further, if students miss a bus they are often late for class due to this wait; it would be more logical to space the buses out so there was a bus every 5mins instead of three every 15mins. Additionally sometime, the 2nd bus will just drive past a stop, however the bus that stopped fills up before everyone at the stop can get on, and now these people must wait even though an empty bus just drove past! Also, drivers should be more encouraging in having people, when able, lift up the seats at the front to create more standing space and allow more passengers when buses are very full. Finally, bus drivers should stop smoking/vaping on Western U property (i.e. at natural science) as it is against their smoking policy.
- Cutting route 16 from summerside is not beneficial. Although replaced with route 24, students will be negatively impacted as the hours of operation are not late enough to provide safe transportation home.
- "do you understand there are businesses in the very east end of london, workers need to be able to get there, and they do come from the west end. Do you realize people work earlier than 7am , seven days a week, That includes sunday mornings. And that they work later than midnight? You have not addressed these needs.
- so remembering people need transportation to get to work, to have a job, they must be able to get there at any time.
- Also maybe the city needs to promote a Greener city, more Transportation, fewer cars less pollution I would hope, less stress from drivers, and less gridlock at the busy times. You could promote these ideas to people who do not want any transit. Do you look at how other cities, as in Europe, handle thier excellent transit planning, you don't have to go there, there is skype. "
- During peak periods buses are often full
- Evening service for the 9B
- "Excellent ideas proposed.

- Reduce crowding, and wait times will be great.
- "Extension of bus service past Hamilton and Clarke and towards the industrial areas towards Veterans Memorial Parkway.
- A express bus service that targets all major malls/shopping centres in the city (Argyle, Masonville, White Oaks, Westmount)"
- Great job guys :)
- I agree with these changes.
- I believe there should be a superior route connecting Fanshawe College and western university. It makes sense to have a dedicated route between both institutions
- I didn't see anything here about the changes to route 40. (I thought it was going to be combined with route 32?) I take this bus quite often, given that I live in Northridge and work at Western. I'm concerned about having a direct route to work from home. As it is, I transfer at Masonville and that is fine, but if you're changing route 10 and changing route 34 to service the Plane Tree neighborhood, there will be no direct line from Masonville to Western, and that's a problem for me (and countless students, I'm sure!). Thanks.
- I don't believe #13 needs to go to Masonville Place. It used to make a loop in the downtown area and you would get a transfer if you are going elsewhere. That's what transfers are for. As it is now, I can get off in front of my work but I have to walk a couple of blocks to get back on the #13 to go home because it turns on Richmond and goes to the mall. The 13 and 13a schedules can also be a bit confusing to read. Why not just make them separate numbers with separate schedules. Much easier to read!
- I have been using the route 1 (Kipps lane) for over 8years. One thing that needs to be improved is the South St/Colborne St/Grey St bend/detour. This is a huge deviation on that route that that reduces the efficiency of the route by costing riders upwards of 5-10minutes per trip on their commute northbound towards downtown and/or southbound towards Victoria hospital. Often time there are no people, if not very few people who use these stops. Should have either the 1A or 1B do this bend/detour or completely remove it as it makes the route very inefficient
- I have made additional comments in the Route 37 section
- I noticed there is a service change upcoming for the 26 to be removed and that will negatively impact me. It is the only route for me to get downtown without having a transfer, and I know in the winter months I won't be able to make it downtown. I would like a compromise between the 93 and 26 where it can still go through the rural area and end up downtown even if it's only one stop (like an express route). I know many people will be disappointed about the 26 being removed and may stop taking the bus entirely. I would like the LTC to please reconsider removing this route.
- I take Route 12 from downtown to Southdale and Wonderland. This bus takes 40 minutes to get me home due to the route it takes. When I take the bus to work in the morning, it only takes 20 minutes to get to downtown. Please consider changing this route somehow. It should not take 40 minutes on 1 bus to get from downtown to anywhere in London. Also, this area is going to become very busy in the near future with all the construction planned for next year. This area of the City seems underserved at present and this will only get worse. While this may

not show in your riders for this route that is probably because the bus is not convenient. Ridership may go up if route is improved.

- I want the 31 to remain in service on Limberlost road, otherwise I will need to walk 3 times as far on the proposed route.
- I would like to see the 38 bus link to either the Fanshawe and Adelaide corner for transferring to the 16 or 25, or have the 16 extend into Stoney creek neighbourhood. Right now there is no access for residence of my neighborhood to get from here to Fanshawe and Adelaide or Fanshawe College without going out of our way on the 38 to Masonville first. The route goes way out of the way if we need to travel from Stoney creek to Fanshawe College or south on Adelaide St. (Or have the 25 extend into our neighbourhood because it's far to get to Grenfell to catch the bus to Fanshawe College) and there are lots of elementary, high school and post-secondary students living in this neighbourhood who would prefer to bus than pay for parking at Fanshawe.
- "I'm happy to see some expansion in the east end routing, especially fo the industrial areas! I know it may not be very busy at all, but it is an incredibly important service for those of us that need it on a daily basis.
- Also, added access to get from Argyle up to Masonville in one trip (either express or a regular route) would be very useful for a lot of people."
- In addition to, or possibly in place of, the change to the Route 91 extension to Argyle Mall, you could also look at possibly extending the Route 25 Fanshawe College-Masonville place route to Argyle Mall as well. That would be wonderful for those of us who live in the Highbury/Huron area. Argyle Mall is a wonderful place to shop, but having to take two buses with the extended wait time between transfers is a royal pain in the "you-know-what". The extension to Masonville was a huge improvement; an extension to Argyle would be equally great.
- Increased frequency of the 14 during weekday peak times. This route sees a large number of strollers which take up 3 seats each. Not only have I heard other riders mention the stroller issue, but I have also heard a number of operators mention the issue as well. In addition, if a rider misses a transfer, which always happens, they are left waiting 30 mins.
- It is my understanding that the 26 to downtown is to be eliminated so this survey is of no value to those of us in the White Oaks west/Cleardale/Highland area as most of the riders will have to take 2 buses or walk further to get to their downtown destination (95% of riders).
- It would be very beneficial to many transit takers and for the LTC if there were more routes from the north west end to Fanshawe College
- It's helpful to have any buses that go to Western extended a few hours later in evenings. Stopping buses at 10pm is too soon for students who may frequent campus later to study, participate in activities, or visit with friends on campus. Specifically talking about university specific routes, like Route 33.
- "Lack of bus shelters is an issue.
- Consistent problems using live arrival website are also an issue (ie. certain stops showing as inactive when they are not; incorrect arrival times/buses not showing up on time).

- Infrequent buses are not a problem in major Canadian cities (ie. transportation in Vancouver, Toronto and Montreal have a waiting time of 7-15 minutes between vehicles depending on type) but London's system is archaic and insufficient.
- Public transit in London is in need of improvement."
- "Living near wonderland and Gainsborough, your proposed changes for the 31 mean that the only route that gets me to work (in Hyde Park), or Western will now be inaccessible to me. You are also proposing that the 9 never enter campus. As a student, it is impossible to transfer to a bus that gets me on to campus during rush hour, the busses are so crowded that they don't stop that close to the school.
- It would be better if the 9 went all way to Hyde Park and to campus, or if you kept the current route of the 31, and extended service later at night- currently NO busses go to Hyde Park past 10:30, but Walmart is 24/7, and there are restaurants out there. I finished work at 9:30 last Sunday, and I ended up having to take a taxi home, which I cannot afford, because there were no busses running"
- looking for the proposed changes for routes 9 &31
- LTC real-time arrival accuracy. Many times the app will say it has already left when in fact it is arriving in a couple mins, or that it is coming when in fact it has left a few mins ago. In cold weather, this could mean someone standing outside for 30 mins waiting for a bus that was originally though to be late but in fact it's gone and they're just waiting for the next one. The website is great but not mobile friendly and no official apps exist for android (unsure of ios). Breakdowns and alerts of route changes should also warrant notifications for people with this app. In fact this survey could have been delivered to them using the app. I work in web app development and I understand its limitations. If you need help finding suitable agencies for the work, don't hesitate to ask.
- Many of us are still waiting for the Pioneer Village to be on a route, at least during the day hours. There are many events there that many can't attend. Additionally, the factories east of Clark Road need bus service. I can't believe how many people cannot take a job out there because they don't have a car!
- More articulated buses need to be added to Routes 1, 2, 4, 6, 9, 10, 11, 12, 13, 14, 16, 20, 24, 29, and 34 not just Route 27
- More buses for UWO campus!! It's crazy how many students take the bus, add some buses, I hate waiting 30 min at NAT SCI and everyone shoving/pushing because they want to get on then it gets sooo full soo crammed and uncomfortable, I like the 29 double buses, add some of those and that should help with the high demand
- More buses runs, more frequent more connectors, in the high travel zones. less idea on London transit! This expensive plan is designed to benefit more student body in our city, I would guess half of that student body does not even line on London the is not paying taxes to help contribute to the maintenance of this terrible project. Not well thought out! We are not a major city like Toronto and look at that major city, do we not now take there garbage! Cause they have no money left to allocate to look after their cities needs. Would hate for London to become that we need to stand for something new and dif perhaps more environmental, perhaps bike stations something unique to keep us our forest city and not a major hub!

- More frequent 90's and 38's would be excellent.
- "More frequent service for the 4 as it is a bus that goes straight to Fanshawe College from White Oaks Mall and is almost always overflowing with people
- More frequent service would make me want to take the bus instead of drive. When I can get somewhere by car in 15 minutes, and it takes 45 minutes on the bus (even longer if the bus is early or late and is missed) I'd much rather drive.
- My hope as rider is to minimize travel time. So I'd favour increasing either schedule adherence or frequency wherever possible to reduce wait times. And cutting out stops that are close together. Looks like some of these things might already be underway.
- None of the routes listed above affect me. More frequent, less bunchednup time for the buses going North/South on Wharncliffe Rd. Would be good though! Especially with the elimination of the #26 which I DO NOT agree with! The 11/12 are always within a few minutes of each other going north and south and always make me end up waiting long periods when going downtown or home from downtown where I have to work and/or transfer.
- Not happy about the change to the 31 and not going directly to the University or the hospital
- "Paratransit needs looking at several times I had to cancel programs and spots because unable to get bookings even up to day of
- People work Sundays. On Saturday I get to work by bus but I have to take a $16 cab ride to work because my shift begins at 7. 7am start for some bus routes doesn't help. Sat schedule on Sunday would.
- Perfect!
- Please create a proper and user friendly mobile app. LTC has not succeeded in completing this in a reasonable time frame. If LTC doesn't have the resources to create an app, please open the data so people who know how to can create apps.
- Please extend buses past midnight. Please stop the 9C/6 madness. I can get downtown on a 9 in 15-20 minutes. It takes 45 in the evening. Please reinstate the stops on Richmond at Dundas. It's ridiculous how far apart downtown stops are now.
- Please just increase the frequency of the 31, especially in weekdays
- Please keep the 13, 10 and 34 going to western universities campus!
- "Public transit is an important part of a growing city like London. These changes will increase bus routes and I strongly support this. Please do not fall for the NIMBYism of some who oppose bus routes near their homes!
- Especially as BRT becomes a reality in London, it will be necessary to continue connecting routes to all areas of the city, so that people will use the BRT.
- For my own personal benefit, I would like to see increased bus service around the Highbury/Kilally area, possibly changing the 25 route to go down Edgevalley Rd.
- Overall, I would like to offer my strong support for these proposed changes!"
- Put more buses on route 4
- Residential Areas are underserved
- Route 11 should increase frequency during peak hours.

- Route 92: Express Masonville to Victoria Hospital extend this to Parkwood Hospital across the road. Currently passengers have to get off at Victoria Hospital and transfer to #6 to get across to Parkwood Hospital. I am sure with the patient/visitor volume to Parkwood Hospital and Mental Health Institute this would be warranted. Again limiting the waiting/transfer process.
- Service to Fox Hollow
- Shelters and snow removal. Trying to get on a bus over a mound of snow because the city or the LTC will not pay to have the stops shoveled deters a lot of people from taking the bus.
- Student bus pass should not be mandatory. I do not have a use for the pass and it is a waste of money.
- "Students taking routes 2 and 102 to the University north of Oxford often seem to be waiting a while for crowded buses.
- Increasing ease of access to shopping malls across London with new (route 94 Wharncliffe) and improved routes is an excellent idea. I am excited for these changes to take place."
- Thank you for the proposed 93 bus!!!!! There should be an express and a non-express version of this bus though.
- The 15 from downtown to Westmount is very crowded in the evening rush hour. People are standing.
- "The 20 needs to come into the Beaverbrook neighbourhood on the weekends. I feel this is important for those in the neighbourhood, especially at night and during the winter when nobody wants to walk outside. It's a 5-10 minute route that will benefit a lot of people.
- There needs to be a bus that runs all the way down Sarnia so those in the Beaverbrook neighbourhood. Students who have class until 10pm can't take the 20 to get home because for some, it's a 30 minute walk into the neighbourhood (20 stops running in the neighbourhood after 9pm). Having a route that goes all the way through Sarnia is very quick and will target a lot of students who live around the Sarnia area.
- Thank you!"
- "The 30 route is not addressed at all. I currently travel from Oxford and Juniper to Green Valley Road, which is a 21 minute drive or 1h 28 minute commute by bus. This is affected by 2 issues, one is that the transfers between routes are poorly timed with an 8 minute layover from the 17 and 90 routes and 27 minute layover between the 90 and 30 route (doesn't change if taking the 10, 19, 13 or 90 routes, still have to wait between 15 and 30 minutes to get on 30 route). The second issue is that the 30 only ever drives Eastbound along the route making green valley road the last stop (20 minutes on bus).
- This currently prevents me from wanting to take the bus unless forced to, where I want to be a daily user.
- For me an ideal situation would be for the 30 to alternate between an A route and B route, same route but half the time it travels east around the current loop, the other half of the time travelling the opposite way around the loop starting at green valley road and ending at Bessemer road.

- In order to address the transfer issue, perhaps adjusting the timing of departure for the 30, or adding in a dwell time at white oaks mall so transfers from other routes are easier. I believe this could become a more important route when the Maple Leaf plant opens up in the area.
- Alternatively, have the 13 or 90 or 10 occasionally cross the highway and go to the Costco or princess auto parking lots so shorten walking time to a reasonable 20 minutes from the 40 it would take now. "
- "The 9 turning into the 6 in the evening often has no indication on Western campus that it is turning into the 9 or 6, you always have to ask the driver. It also seems a bit redundant to have the route go around campus twice. The other issue is that the 9 and 31 appear within minutes of each other on campus, meaning if you miss one, you've missed both for the next hour. Hopefully increasing the frequency will fix that.
- Another thing that concerns me is that if there are route changes to the 9 and 31, there may end up being a long walk to bus stops for those who live west of aldersbrook."
- "The 94 should continue north to Masonville Place. It would be good to have the connection from argyle mall straight to Masonville. It's a shame it just stops at western university. This would be a missed opportunity to have efficient service.
- I also feel that all the busses need an earlier bus than currently. For example bussing from argyle area to Masonville to be at work for 6:30am doesnt work. I can walk 25 mins and catch a 25 but we often see people running from the bus once it reaches Masonville. Even a 15-30min earlier bus on most routes would be a huge benefit for a lot of people "
- The bus 10 should become the big bus rather than the 33. There are many commuters who aren't able to fit in the bus who have no other way to get home.
- The change with the 34 to Alumni.
- It's extremely useful just the way it is now, especially for those of us living north of campus near Richmond and Western. The 34 is an essential for us, ESPECIALLY in the mornings. If this route changes, everyone living near Masonville will have no way to get to Alumni Hall, or any way to even get close until 2pm when the 10 starts finally (which is also kinda ridiculous; I wish it went to and from Masonville way earlier, especially with the 13 detour).
- Alumni is one of the best stops on campus in regard to being close to everything, and if the 34 changes, that entire area becomes relatively inaccessible to a lot of people. "
- The number 2 Dundas bus from downtown to Argyle Mall at off peak times is not good at all.
- In particular I am a client of Dale Brain Injury Services which is located at 345 Saskatoon Street. This is a 10 - 15 minute walk to the nearest bus stop. When this is added to the poor service along this corridor at off-peak times it can be quite a frustrating experience.
  I would appreciate someone calling me to discuss this issue.
  My phone number is 519-495-4487.
  Thank you
  Matthew Sweeney
- "The proposed plan to eliminate route 32 is horrendous for me. I take bus 31 /32 every day, twice a day. Your plan to drop 32 and put in a hourly route of bus 40, essentially means that I can no longer get to my job and I am left unemployed. Thanks.

- Although the economic situation of many people living along Windermere Rd might mean they don't take a bus to work, the people that can't afford a car, like me, NEED public transportation to survive in this area. Your plan hurts those that need the bus the most. Why are you only considering those that don't need this service? Please consider those that do need it. People like myself have no option but to take transit and now I have no option at all. Essentially you are making Windermere Rd a dead zone for transit users and harming people who travel down that road. Once an hour service may as well be no service at all. Please don't fool yourself that this change will benefit bus users, it just means that you will lose all riders and ultimately raise the user costs for everyone. So the rich get richer and the poor get poorer. The bus system is supposed to be for the good of all, not just to keep the more affluent people happy with ""prettier roads "" and fewer buses tainting their neighborhoods. This is absolutely unfair.
- I also notice that you did not even include this proposed change in the options listed above. So essentially you don't really care to hear about our comments pertaining to this route elimination. Perhaps you should really consider what people really think and stop pretending that you are gathering public opinion. At least run route 40 on a half hour timetable so that the route can be useful. Don't pay lip service by putting on a route so infrequently that it can't be used and then using low ridership as justification to drop the route altogether. Windermere Rd is one of the east-west arteries in the north end of town. It would be selfish and logistically stupid to treat it as anything but. People like myself are trying to make transit work and realistically trying to get to work. Don't shaft the very people you say you are trying to help. "
- The route 2 and 102 stop is way too busy for the university students. Past oxford and wharncliff stop, multiple busses will pass you during weekday mornings resulting in missing classes very often. Even when at the bus stop at 8:55, i sometimes am late to a 9:30 class due to capacity and traffic on top of this.
- "There needs to be a way to get from the Cherryhill area to Western's campus on weekends. There are a large number of students in the area, between the Proudfoot apartments and the Cherryhill apartments, and as it stands, getting to campus on weekends is a major headache. I have to either walk or take two buses to get to Western. But due to the unreliability and low frequency of buses, transferring is a major gamble- what if the first bus is late and the second bus is early? Then, oops, you've missed your connection and have to wait 20+ minutes! Sure, you can leave extra early to make sure that if something goes wrong, you won't be late... but it's quite ridiculous to give myself an hour or more of transit time when I can walk to campus in 25 minutes. I have been late to meetings and exams because I trusted the LTC to move me a distance of less than 3 km in a reasonable amount of time.
- Oh, and can we talk about the reliability issue? I have missed countless lectures and several doctor's appointments because the bus was either 10 minutes early, or super, super late. And do you know how much it costs when I miss a doctor's appointment? Two weeks' worth of groceries for me. I lived off plain rice for a f**king week in November because I had to pay the missed appointment fee because my bus just decided to not show up. An hour before I have to leave, I start refreshing the live arrival times to keep an eye on when my bus is supposed to arrive, and even that isn't reliable. Knowing I have to catch the bus to be somewhere at a certain time gives me anxiety now.

- Seriously, you are the bane of my existence and I hate you."
- There should be a bus that runs directly from the Western University to Fanshawe College as several students take part in bridging programs between the two post-secondary institutions.
- "There should be heaters installed in the bus shelters for winter storms. Often people get stuck in bus shelters during storms because buses get stuck earlier in the trip, meaning people wait upwards of 1.5hrs waiting for bus service.
- Lights should also be installed as the bus shelters because unsafe during later periods of the evening.
- See the following:
    - https://www.cbc.ca/news/canada/heated-bus-shelters-1.232373
    - https://globalnews.ca/news/1789564/regina-transit-introduces-heated-bus-shelters-google-maps-integration/
    - https://www.cbc.ca/news/canada/edmonton/edmonton-warms-to-heated-bus-shelters-1.2919861
- What about #1 and how about spacing the busses out so they are not travelling in packs. If I am late I have to wait half an hour at Dundas and Wellington Not a safe place to wait at night
- What about route 16? It gets pretty busy in the morning and in the early afternoon.
- "With the substantial increase in flights that is expected this year, I believe increased airport service is justified to support ridership growth.
- More service hour extensions should also be a priority. We still lag behind comparable agencies in terms of late-night service. A basic level of service should be extended until 2am weekdays and Saturdays and midnight on Sundays.
- Other service hour extensions that I believe are important:
- Extend service to Riverbend on weekends and evenings.
- Extend 27-29 to midnight and earlier on weekends.
- Earlier and later Routes 19, 38, 39 and 31.
- Later Route 25.
- Extend 24 evening service
- Route 3 should be extended later.
- Also to reiterate my previous comments.
- Service in Riverbend should be extended to the Riverbend and Oxford intersection to service the high density node that is developing and the growing neighbourhood to the south. Doing so would have negligible effect on time travel.
- The neighbourhoods framed by Fanshawe Park, Wonderland, Hyde Park and Sunningdale require transit service. Additionally, the density and socio-demographic make-up of the area indicate that conventional service would be appropriate. A Tokala Trail loop of the neighborhood would provide effective service coverage and efficient routing.
- To address the over-service to the neighbourhood east of Wellington and north of Bradley, modify Route 13A to serve only Southdale, Millbank and Bradley. Appropriate service coverage would be maintained.
- Thank you for giving me the opportunity to comment. Good luck!"

- Would prefer the 33 to run later into the night and earlier in the morning, as there are many students living in areas serviced only by route 33. If I have to be at work by 7AM, I'd have to leave my house at 5:45AM since the route 33 does not run that early. Furthermore, some classes do not end until 10PM and the last bus stops at 10PM - making it difficult for those of us who have late night classes to get home safely.
- Yes this will help Western students get to class on time and not havin to worry about full busses and/or hoping to have university buses come.
- Yes! Increase the frequency!!
- "Yes. I believe Routes 9A & 9B should continue to travel directly to downtown London. I live on Limberlost Road, which is a densely populated road having families with children, seniors and disabled individuals. The proposed two bus system to downtown is very inconvenient and will greatly increase travel time!
- You have taken service away from Sherwood Forest/Orchard Park subdivisions
- You must make the buses more bigger because there is a lot of overcrowding and not enough seats for so many people, if you cannot do this then you should definitely make sure that the next bus comes within 20 minutes so people are not late to work or waiting in the cold.