

To All Commissioners

**Re: Draft 2018 Conventional Service Plan**

### **Recommendations**

That the Commission:

- i) APPROVE, in principle, the draft 2018 conventional service plan;
- ii) DIRECT administration to finalize the 2018 service plan, including, where appropriate, meeting with affected communities regarding the potential changes and forward a copy of the draft service plan report to Members of Council; and
- iii) PRESENT the final 2018 service plan report and recommendations at the Commission's January 31, 2018 meeting.

### **Background**

At the April 29, 2015 meeting, the Commission approved the Route Structure and Service Guidelines Review as a framework document for service changes over the five year period covering 2015-2019. When a multi-year plan is prepared, a number of assumptions have to be made with respect to how the various recommended changes in any one year will impact the service and ridership. Additionally, the current on-road experience is relied upon as the basis for the recommendations. As each year's plan is implemented, service realities change, both in response to the service changes as well as conditions outside of the Commission's control (i.e. traffic congestion, extended periods of construction, ridership response to changes, etc.). 2018 represents the fourth year of the five year plan, and as such, variance from the changes contemplated in 2018 are expected.

Consistent with practice, the 2018 draft service planning process takes direction from the recommendations in the report, but also includes assessments pertaining to:

- existing service performance issues and demands
- 12 month assessment of the 2016 service plan changes
- early assessment of the 2017 service plan changes
- new growth areas
- customer requests
- Operator, Inspector and Dispatcher feedback

Enclosure III sets out the revised implementation plan and associated timelines compared to the Route Structure and Service Guidelines Review Plan.

This report sets out the proposed 2018 service plan recommendations, including discussion related to changes from the Route Structure and Service Guidelines document. Additionally, discussion is provided on the 12 month and two month assessments of the 2016 and 2017 Service plans respectively, as well as reviews of the semi-express Route Service Guidelines and Industrial Service.

### **Draft 2018 Service Plan Changes**

As 2018 is the fourth year of the five year plan, priorities have changed or been adjusted based on previous years changes, current service realities and public and Operator feedback. Similar to the 2017 process, a number of frequency, running time and routing changes were identified as high priority to address current on road concerns in the 2018 process. Table I below sets out the 2018 Draft Service Plan proposals.

While the proposed plan appears to deviate substantially from the Route Structure plan, it should be noted that a number of the changes originally scheduled for implementation in 2018 were thought to be higher priority and have been implemented as part of previous service plans. Additionally, based on current priorities a number of changes have been deferred to be reviewed in 2019 and beyond.

The draft 2018 service plan sets out the changes that are the highest priority, totalling approximately 24,300 hours on an annual basis and eight additional peak period bus requirements. Noting the approved 2018 budget allows for the addition of 17,700 annualized hours and four additional peak period buses, further assessment will be completed to prioritize changes and evaluate tripper vehicle requirements based upon proposed service improvements.

One of the most significant proposed changes, not identified in the Route Structure and Service Guidelines Review, are routing modifications in the Westmount area, including the elimination of Route 23. Route 23 largely duplicates other routes with the highest number of boardings at the terminal points. As set out in Enclosure I, the proposal identifies routing modifications on other routes in order to maintain appropriate service coverage in the Westmount area.

It should also be noted that a number of the proposed 2018 changes deviate from the standard clock-face headway scheduling, which has traditionally been used as the standard scheduling practice. Clock-face schedules are easy for passengers to memorize as departure and arrival times occur at consistent intervals, repeating during the day. For example, a route with a 10 minute frequency would repeat every 10 minutes at the same times each hour. Additionally, clock-face scheduling helps to facilitate transfers between routes, especially at major terminals. While clock-face scheduling has historically been significantly important in scheduling bus routes, there are a number of recommendations in the 2018 plan that deviate from this practice. The majority of the recommendations that deviate from the standard clock-face headway scheduling are on post-secondary centered routes that are highly origin/destination oriented, resulting in limited demand for transfers and less of a need to maintain clock-face schedules. Additionally, passengers on post-secondary centered routes tend to rely on real-time information as opposed to memorizing paper schedules creating an opportunity to deviate from the standard scheduling practice while minimizing impacts on passengers.

**Table I - 2018 Draft Service Plan**

Route	Proposed 2018 Recommendations	Annual Service Hour Impact	Service Hour Impact (2018)	New Peak Buses	Origin of Change	Rationale for Change
Route 2	Weekday - Increase round trip time from 105 minutes to 120 minutes in the between 10 am and 2 pm	508	164	0	Annual Service Plan Process	Schedule Adherence
Route 2	Weekday - Increase frequency from 30 minutes to 20 minutes during the late evening period. (9 pm to 12 am)	1,512	492	0	Annual Service Plan Process	Frequency Improvement
Route 2	Saturday - Increase round trip time from 105 minutes to 120 minutes during the peak period. (12 pm to 6 pm)	312	102	0	Annual Service Plan Process	Schedule Adherence
Route 2	Saturday - Increase round trip time from 90 minutes to 105 minutes during the early evening period. (6 pm to 9 pm)	156	51	0	Annual Service Plan Process	Schedule Adherence
Route 3	Sunday – Remove routing from Dufferin Ave.	0	0	0	Annual Service Plan Process	Routing Modification
Route 3/5	Interline Route 3 and 5.	0	0	0	Annual Service Plan Process	Routing Modification
Route 4	Weekday - Increase round trip time from 105 minutes to 120 minutes during the pm peak period. (4 pm to 6 pm)	504	164	1	Annual Service Plan Process	Schedule Adherence
Route 4	Saturday - Increase frequency from 30 minutes to 25 minutes during peak pm and early evening periods. (12 pm to 9 pm)	468	153	0	Annual Service Plan Process	Frequency Improvement
Route 5	Route Modification – Modify route to alternate between an A and B routing. 5A would operate only on Springbank between Horton and Wonderland. 5B would operate through Springbank Dr. Berkshire Dr., Gardenwood Dr., Ridgewood Cr., Kerohan Pwky and Springbank Dr.	0	0	0	Annual Service Plan Process	Route Modification
Route 6	Saturday - Increase round trip times from 80 minutes to 100 minutes during the peak pm period. (12 pm to 6 pm)	312	102	0	Annual Service Plan Process	Schedule Adherence
Route 6	Weekday - Increase frequency from 30 minutes to 25 minutes during the peak pm period. (2 pm to 6 pm)	1,008	328	1	Annual Service Plan Process	Frequency Improvement

Route	Proposed 2018 Recommendations	Annual Service Hour Impact	Service Hour Impact (2018)	New Peak Buses	Origin of Change	Rationale for Change
Route 7	Route Modification- Modify route to serve Argyle Mall before and after serving the Nelson Park/Wavell loop.	0	0	0	Annual Service Plan Process	Route Modification
Route 10	Route Modification - Remove evening and Sunday loop on Teeple Terrace and Berkshire Dr.	0	0	0	Annual Service Plan Process	Route Modification
Route 11	Route Modification – Modify route to Topping La., Berkshire Dr. and Robin Rd., between Commissioners and Base Line Rd. Remove service from Viscount, Cranbrook, and Commissioners.	0	0	0	Annual Service Plan Process	Route Modification
Route 7/11	Weekday – Increase frequency from 30 minutes to 20 minutes during peak periods. (7 am to 9 am and 2 pm to 6 pm).	3,024	2,296	2	Annual Service Plan Process	Frequency Improvement
Route 12	Sunday - Increase frequency from 60 minutes to 30 minutes (10 am to 6 pm).	496	184	0	5 Year Service Plan Framework	Route Structure Review
Route 12	Weekday - Increase round trip time from 60 minutes to 80 minutes during the peak pm period. (4 pm to 6 pm)	504	164	1	Annual Service Plan Process	Schedule Adherence
Route 15/21	Operate the Farnham/Dalhousie loop as a branch on alternate Route 15 trips during Weekday and Saturday daytime periods. (6 am to 6 pm)	2,328	758	1	Annual Service Plan Process	Route Modification
Route 15/21	Route Modification- modify route to service to Viscount, Cranbrook, and Commissioners (currently served by Route 11) on alternating Route 15 trips.	0	0	0	Annual Service Plan Process	Route Modification
Route 15/21	Weekday - Increase frequency from 30 minutes to 20 minutes during the early evening period (6 pm to 9 pm).	1,512	492	0	5 year Service Plan Framework	Route Structure Review
Route 16	Weekday - Increase round trip time from 100 minutes to 120 minutes during base noon periods. (1 pm to 2 pm)	252	82	0	Annual Service Plan Process	Schedule Adherence
Route 16	Saturday - Increase frequency from 30 minutes to 25 minutes between 8 am to 10 am	104	34	0	Annual Service Plan Process	Frequency Improvement
Route 17	Weekday - Increase frequency from 30 minutes to 20 minutes between 6pm and 9pm.	1,512	492	0	5 year Service Plan Framework	Frequency Improvement
Route 17	Weekday - Increase round trip time from 120 minutes to 140 minutes between 2 pm and 4 pm	504	164	0	Annual Service Plan Process	Schedule Adherence
Route 17B	Route Modification – Modify route to Westdel Bourne in Riverbend.	1,008	328	0	Annual Service Plan Process	Route Modification
Route 20	Route Modification - Operate Oakcrossing loop during weekday evening periods (6 pm – 10 pm)	2,016	656	0	Annual Service Plan Process	Route Modification

Route	Proposed 2018 Recommendations	Annual Service Hour Impact	Service Hour Impact (2018)	New Peak Buses	Origin of Change	Rationale for Change
Route 20	Route Modification - Operate Oakcrossing loop during Saturday daytime periods (6 am to 6 pm).	1,040	340	0	Annual Service Plan Process	Route Modification
Route 20	Route Modification - Operate Oakcrossing loop during Sunday daytime periods (9 am to 6 pm)	558	207	0	Annual Service Plan Process	Route Modification
Route 23	Eliminate Route	-7,659	-2,494	-2	Annual Service Plan Process	Route Modification
Route 24	Route Modification – Modify route to Wonderland and Commissioners.	0	0	0	Annual Service Plan Process	Route Modification
Route 24	Weekday – Decrease frequency from 30 min to 35 during PM peak periods (3 pm to 6 pm).	0	0	0	Annual Service Plan Process	Schedule Adherence
Route 27	Saturday - Introduce service in the peak and early evening periods on a 40 minute frequency (11 am to 9 pm) Fall/Winter Only	520	170	0	Annual Service Plan Process	Service Span
Route 29	Weekday - Increase frequency from 15 minutes to 13 minutes during the peak pm period. (4 pm to 6 pm) Fall/Winter Only	308	156	1	Annual Service Plan Process	Frequency Improvement
Route 29	Weekday - Increase frequency from 15 minutes to 12 minutes during am and base periods (7 am to 12 pm) Fall/Winter only	0	0	0	Annual Service Plan Process	Frequency Improvement
Route 29	Extend Monday-Thursday Schedule to Friday Fall/Winter Only	185	94	0	Annual Service Plan Process	Service Improvement
Route 29	Weekday - Increase frequency from 20 minutes to 13 minutes between 8 pm and 10 pm. Fall/Winter Only	308	156	0	Annual Service Plan Process	Frequency Improvement
Route 29	Saturday - Introduce service in the peak and early evening periods on a 35 minute frequency (12 pm to 9 pm). Fall/Winter Only	243	135	0	Annual Service Plan Process	Service Span
Route 29	Sunday - Introduce service in the peak and evening periods on a 35 minute frequency (1 pm to 9 pm). Fall/Winter Only	264	144	0	Annual Service Plan Process	Service Span
Route 33	Weekday – Increase frequency from 15 minutes to 13 minutes during the pm periods (1 pm to 6 pm)	0	0	0	Annual Service Plan Process	Frequency Improvement
Route 33	Weekday – Decrease frequency from 15 min to 17 min during am and base periods (7 am to 2 pm). Fall/Winter Only	0	0	0	Annual Service Plan Process	Schedule Adherence
Route 33	Weekday - Increase frequency from 30 min to 17 min during the early evening period (6 pm to 9 pm). Fall/Winter Only	462	234	0	Annual Service Plan Process	Frequency Improvement
Route 33	Extend Monday-Thursday schedule to Friday. Fall/Winter Only	77	39	0	Annual Service Plan Process	Service Improvement

Route	Proposed 2018 Recommendations	Annual Service Hour Impact	Service Hour Impact (2018)	New Peak Buses	Origin of Change	Rationale for Change
Route 90	Weekday - Increase frequency from 20 minutes to 15 minutes during the base period. (11 am to 2 pm)	756	246	0	Annual Service Plan Process	Frequency Improvement
Route 90	Weekday - Increase round trip time from 75 minutes to 90 minutes during the pm peak period. (4 pm to 6 pm)	504	164	1	Annual Service Plan Process	Schedule Adherence
Route 90	Weekday - Introduce 35 minute frequency during the early evening period. (6:30 pm to 9 pm)	1,260	410	0	Annual Service Plan Process	Service Span
Route 90	Saturday – Increase frequency from 30 minutes to 25 minutes during pm peak period. (10 am to 6 pm)	416	164	0	Annual Service Plan Process	Frequency Improvement
Route 90	Sunday - Increase frequency from 30 min to 20 min (11 am to 6 pm).	434	161	0	Annual Service Plan Process	Frequency Improvement
Route 90	Sunday - Introduce 30 minute frequency in the early evening period. (6 pm to 7 pm)	62	23	0	Annual Service Plan Process	Service Span
Route 91	Saturday – Introduce 25 minute frequency during peak periods and early evening periods. (11 am to 9 pm)	1,040	340	0	Annual Service Plan Process	Service Span
Route 91	Sunday – Introduce 25 minute frequency during peak periods and early evening periods. (12 pm to 8 pm)	992	368	0	Annual Service Plan Process	Service Span
Route 102	Weekday – Increase frequency from 15 minutes to 12 minutes between 11 am and 12 pm. Fall/Winter Only	462	234	0	Annual Service Plan Process	Frequency Improvement
Route 102	Weekday – Increase round trip times from 48 minutes to 60 minutes during the pm peak period. (4 pm to 6 pm). Fall/Winter Only	308	156	1	Annual Service Plan Process	Frequency Improvement
Route 102	Weekday – Increase frequency from 45 minutes to 22 minutes during the early evening period (6 pm to 9 pm). Fall/Winter Only	462	234	0	Annual Service Plan Process	Frequency Improvement
Route 102	Weekday – Introduce service on a 40 minute frequency during late evening periods (9 pm to 11:30 pm). Fall/Winter Only	385	195	0	Annual Service Plan Process	Frequency Improvement
Route 102	Saturday – Introduce 40 minute frequency between 11 am and 11 pm. Fall/Winter Only	324	180	0	Annual Service Plan Process	Service Span
Route 102	Sunday – Introduce 40 minute frequency between 11 am and 10 pm. Fall/Winter Only	363	198	0	Annual Service Plan Process	Service Span
Route 106	Weekday – Increase round trip times from 40 minutes to 50 minutes during the pm peak period. (4 pm to 6 pm).	308	156	1	Annual Service Plan Process	Schedule Adherence
Route 106	Weekday – Increase frequency from 40 minutes to 20 minutes during the early evening period (6 pm to 9 pm). Fall/Winter Only	462	234	0	Annual Service Plan Process	Frequency Improvement

Route	Proposed 2018 Recommendations	Annual Service Hour Impact	Service Hour Impact (2018)	New Peak Buses	Origin of Change	Rationale for Change
Route 106	Weekday –Introduce service on a 35 minute frequency during the late evening period (9 pm to 11:30 pm). Fall/Winter Only	385	195	0	Annual Service Plan Process	Service Span
Route 106	Saturday – Introduce Service on a 35 minute frequency between 11am and 11 pm. Fall/Winter Only	324	180	0	Annual Service Plan Process	Service Span
Route 106	Sunday – Introduce Service on a 35 minute frequency between 11 am and 10 pm. Fall/Winter Only	363	198	0	Annual Service Plan Process	Service Span
Route 102/106	Extend Monday-Thursday schedule to Friday. Fall/Winter Only	370	187	0	Annual Service Plan Process	Service Improvement
<b>Total</b>		<b>24,326</b>	<b>10,610</b>	<b>8</b>		

A more detailed discussion of the proposed changes is provided in Enclosure II. The discussion includes high level consideration of budget limitations, and provides what is considered to be the most effective and efficient means to resolve each issue.

#### Modifications from the Five year Route Structure Framework

Set out below are recommendations from the Route Structure and Service Guidelines plan, as previously scheduled for 2018 that are not being recommended.

#### **Route 9**

Route 9C, operates through the Whitehills neighbourhood in the evening only, replacing the 9A/9B routing. Additionally, the 9C is interlined with Route 6 at Natural Science after 7 pm.

Through further review of the productivity of Route 9 and the hour investment required on Route 6 to ensure clock-face, scheduling is maintained in the evening hours on weekdays and Saturdays, it was determined that this was not one of the top priorities for an investment of hours as part of the 2018 service plan. Additionally, the plan did not account for additional hours required on Sunday on Route 6 after 7 pm meaning that Route 9C only would operate on Sunday evenings or Route 6 would operate on a non-clock-face headway during this period. Administration is recommending postponing this change to be re-assessed as part of the 2019 service plan.

#### **Route 14**

The recommendation to improve frequency to 20 minutes during the weekday peak periods was implemented as part of the 2016 service plan.

#### **Route 18**

Since the approval of the Route Structure and Service Guidelines Review, Route 18 has been eliminated and replaced with Route 102/106. Further discussion is held in Enclosure III with respect to proposed improvements for Route 102/106.

#### **Route 25**

While early ridership indications show that the route is performing above minimum productivity standards, the routing modifications have been in place for only two months and have not allowed for a full review of ridership demands based on seasonal changes. Administration is recommending that frequency improvements in the early evening on weekdays and Saturdays and all day Sunday be deferred to the 2019 service plan review process to allow for further analysis on the need for frequency improvements.

#### **Route 26**

Service hour extensions on weekdays and Sundays were implemented as part of the 2017 service plan

#### **Route 31**

The Five year plan set out recommendations to improve frequency on Route 31 in 2018, however it did not account for improvements that would also have to be made to Routes 19 and 32 as the routes are interlined. After further review, the proposed hour investment to reduce the headway from 60 minutes to 30 minutes in the early evening on weekdays and Saturdays and implementing weekday late evening service would increase from 1,830 to 5,490 annualized hours. Ridership on this route does not currently warrant such a significant investment in service hours, as there are more pressing demands that need to be addressed. It is recommended that the current frequency during these periods be maintained at this time and that the improvements be deferred and reviewed as part of the 2019 service plan review.

## **Route 91**

The current recommendations in the five year plan, call for an increase in weekday frequency from 15 minutes to 10 minutes in both the AM and PM Peak periods and from 30 minutes to 20 minutes during the weekday base period. Based on the success of weekend service on Route 90 as well as customer requests, Administration recommends investing the hours into weekend service on Route 91 instead as there is a greater potential for ridership growth as well as alleviating current overcrowding issues on Route 17 on the weekends

### 12 Month Assessment of the 2016 Service Plan Changes

Historically, an eight month assessment of the previous years' service changes would be completed as part of the draft service plan report in the following year. Due to the change in timing of the service planning process to accommodate the increase in the number of service changes as well as the additional time required to implement the changes, only a four month review of the 2016 service changes was completed as part of the 2017 final service plan report presented to the Commission at the January 25, 2017 meeting.

The 2016 service plan was the single largest change in recent London Transit history, comprising over 74,000 service hour changes including the addition of 17,700 new service hours on an annualized basis. The 2016 plan focused on right sizing the system by better matching service with demand. This included extensive routing modifications and eliminations as well as frequency and service hour adjustments throughout the city.

A full 12 month assessment of the 2016 service plan modifications has been completed, a summary of which is set out in Enclosure II. The summary includes a high level assessment of each change compared to its intended impact on ridership and service quality.

Overall the 2016 changes have been met with positive reviews and are performing above current boarding/revenue-vehicle-hour (rev-veh-hr) performance standards.

### Two Month Assessment of the 2017 Service Plan Changes

With the end of the traditional vacation period and the return of students, the beginning of September always brings heightened activity on the conventional system resulting in issues of congestion and overcrowding. There is generally a three to four week settling down period as travel patterns become more routine and customers familiarize themselves with the system. While the number of routing modifications in 2017 was significantly less than in 2016 and had more localized impacts, all schedules with the exception of eight routes were modified as part of the 2017 plan. The number of schedule changes contributed to the heightened activity associated with the service changes as customers became familiar with the changes and the impact on their respective travel needs.

At the September 27, 2017 meeting, a three week assessment of the service change impacts was presented to the Commission (see Staff Report #1, September 27, 2017). Over the past month, administration has continued to monitor the service changes and associated customer contacts.

Public contacts have risen with respect to concerns regarding schedule adherence. Due to a number of ongoing construction projects as well as construction starting in areas that London Transit was unaware of, there has been a significant impact on schedule adherence on a number of routes. It is anticipated that schedule adherence will improve by mid to late November when the construction projects are completed.

Positive feedback has been received with respect to the routing modifications on Route 25 and the direct connection between Fanshawe College and Masonville Mall. Additionally, the implementation of weekend service on Route 90 has been well received by passengers.

Staff will continue to monitor the impacts of the 2017 service plan changes over the next 11 months, making minor adjustments to improve scheduling, if required, and adding tripper buses as necessary and as resources permit. A detailed assessment of the 2017 service plan changes will be presented to the Commission in the fall of 2018.

### Semi-express Route Service Standards

At the June 21, 2017 meeting, staff presented a report on the new semi-express Service Stop Warrant Guidelines (See Staff Report #7, June 21, 2017). The intention of the new guidelines was to have a standardized mechanism for evaluating new stop requests on existing semi-express routes, and to determine stop locations for any new semi-express routes on a go-forward basis. At the meeting the Commission directed administration to evaluate the semi-express service in comparison to the service guidelines of these routes and report back on same as part of the Draft 2018 Conventional Service Plan report.

The Route Structure and Service Guidelines Report, approved by the Commission in April 2015, sets out the service standards for each route classification including semi-express routes. The established service standard guidelines for semi-express routes set the following targets:

- Stop spacing along Semi-express Routes should be designed to ensure that 75% of the passengers within the corridor have convenient access to the semi-express service

- Semi-express service should be scheduled to save at least 15% of the regular route travel time, with a minimum time savings of 10 minutes from end to end

When the service standards were established, London Transit had limited experience with semi-express routes as only Route 90 was in operation. Unlike Routes 91 and 92, Route 90 deviates from the alignment of Route 13 both downtown and by bypassing Western University. This has a significant impact on the travel time savings that the other semi-express routes do not have the advantage of. Additionally, while Route 90 exceeds the 15% travel time savings, the minimum time savings of 10 minutes from end to end is still not achieved.

Currently London Transit operates three semi-express Routes, 90, 91 and 92. Table II below sets out the current performance for each semi-express route.

**Table II- Semi-express Route Performance**

Route	Percentage of Passengers with convenient access to the semi-express Service	Travel Time Savings
90	55%	9.2 min (23.2%)
91	70%	2.5 min (11.9%)
92	72%	3.8 min (12.8%)

As noted from the above table, none of the existing semi-express routes meet the established guidelines for access or travel time savings. As with all routes, semi-express routes are a balance between convenient access and operational efficiency. Adding more stops provides greater access to the service, while fewer stops would improve travel speed, but reduce coverage.

Currently the semi-express routes operate along the same corridors as the local routes, with the only time saving advantage being a fewer number of stops. The semi-express routes are subject to the same traffic delays as other routes and do not currently have any advantages such as traffic signal priority or queue jump lanes to increase speed. In order to meet the standard of 15% travel time savings and a minimum of 10 minutes, additional stops along the route would have to be removed, reducing convenience for passengers. Alternatively measures such as designated lanes, queue jump lanes and transit signal priority would positively impact travel time savings.

Typically a standard of 20 seconds per stop is used in transit planning as an average time required to service a stop including deceleration, serving the stop and accelerating. Based on this standard, three stops would have to be removed to save an additional minute of travel time for each semi-express route. In the case of Routes 91 and 92, all stops along the route, with the exception of the two terminus points, would need to be removed and even then they would not meet the minimum time savings of 10 minutes. Additionally, the percentage of passengers with convenient access to the semi-express Service would be significantly reduced.

It should be noted that the standards set out in the Route Structure and Service Guidelines document are guidelines, and as such need to be weighed against the cost and benefits to determine the way to best serve passengers. From a passenger perspective, the semi-express routes have been very popular, with numerous requests for extended hours of operation and the introduction of weekend service. Each semi-express Route has met or surpassed minimum boarding per revenue vehicle hour standards for semi-express Route during all operating periods.

The City of London is currently working on procuring a new state of the art intelligent transportation system, including adaptive control along key corridors. Administration will continue to work with City staff to review the feasibility of adding traffic signal priority at additional intersections along semi-express routes as part of the upgraded intelligent transportation system. Additionally, London Transit will work with civic administration to assess the possibility of queue jump lanes as part of road widening projects.

The current standards should also be assessed to determine if they are operationally optimal. Specifically the standard to have routes scheduled to be at least 15% faster than the line buses **and** save at least 10 minutes from end to end should be re-evaluated. As Table II indicates, Route 90 is scheduled to save 23.2% over the Route 13, however this equates to only 9.2 minutes. A better standard may be to state semi-express routes should be scheduled to be at least 15% faster than line buses **or** save a minimum of 10 minutes from end to end.

As coverage and number of stops are related, staff will review both of the standards and include an analysis as part of the Final 2018 Service Plan to be presented at the January 2018 meeting.

### Industrial Service Review

London Transit Administration has been working with the London Economic Development Corporation (LEDC) to gather data to assess the potential needs to extend existing Industrial Service as well as reviewing the possibilities to extend service into Industrial areas that do not currently have access to public transit within 400 meters.

LEDC conducted a survey with member employers in Industrial Areas that currently have access to transit as well as companies outside of the current coverage area. While the data gathered will be useful in the review process, the response rate was limited with only 13% of businesses in the Industrial areas responding.

Administration has reached out to the City of London in order to obtain a list of other businesses that we may be able to reach in these areas to gather a larger sample size to provide more input into the review process.



Based on current ridership counts, all of the industrial routes are exceeding the minimum boardings per revenue vehicle hour standard for Industrial routes of 15 boardings per hour as set out in the five year Route Structure and Service Guidelines document. While improvements or expansion in Industrial service was not recommended as a top priority as part of the five year plan, based on the need to focus on other operational issues such as right sizing the system and addressing overcrowding and schedule adherence, these areas will continue to be reviewed as part of the annual service planning process and evaluated against other priority improvements.

With 2019 being the final year of the five year plan, the majority of the priority operational concerns have been addressed, allowing for a focus on other areas including a review of service to Industrial areas.

### Next Steps

London Transit will be promoting the draft service plan through on-board notifications, the LTC website, radio ads, public information sessions and community associations. Social media messaging will also be utilized to inform the public about the draft plan and related public information centres.

Five public information sessions have been scheduled in the affected communities, including two sessions held centrally downtown. Further, the Commission's annual drop-in sessions are scheduled for November 30, 2017 at the Central Public Library. The information sessions will take place between November 14 and December 7, 2017, the details of which are set out below.

Central Public Library	November 14, 2017
Westmount Shopping Centre	November 16, 2017
Byron Public Library	November 22, 2017
Cherryhill Public Library	November 28, 2017
Central Public Library	November 30, 2017
Central Public Library	December 7, 2017

All of the information sessions will be held from 2 to 4 pm and 6 to 8 pm.

Over the next three months, staff will further assess the identified priorities and refine the recommended service changes included in the final 2018 Service Plan.

As referenced, the final recommendations respecting the 2018 Conventional Service Plan are scheduled to be presented to the Commission for approval at its January 31, 2018 meeting.

Consistent with the recommendations, this report will be shared with all Members of Council.

### Enclosures

- I - Draft 2018 Conventional Service Plan Changes
- II - 2016 Service Plan Twelve Month Assessment
- III - Route Structure Review – Revised Implementation Plan

Recommended by:

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## DRAFT 2018 SERVICE PLAN CHANGES

### *Route Structure and Service Guidelines Review*

The following changes were set out in the five year Route Structure and Service Guidelines Review and targeted for implementation in 2018:

#### **Route 12**

##### ***Proposed Service Changes:***

1. Sunday – Increase frequency from 60 minutes to 30 minutes between 10 am and 6 pm

##### ***Issue/Rationale:***

The enhanced frequency provides an improved connection to downtown and supports off-peak ridership growth.

##### ***Impacts:***

Proposed Service Change	Annual Service Hour Impact	Service Hour Impact (2017)	PM Peak Bus Requirements
Sunday - Increase frequency from 60 minutes to 30 minutes (10 am to 6 pm).	496	184	0

#### **Route 17**

##### ***Proposed Service Changes:***

1. Weekday – Reduce headway from 30 minutes to 20 minutes between 6 pm and 9 pm

##### ***Issue/Rationale:***

Currently, Route 17 is a major East-West route travelling along one of the busiest corridors in the city (Oxford Street). The headway reduction adds service during a high-ridership time period and will help alleviate overcrowding.

##### ***Impacts:***

Proposed Service Change	Annual Service Hour Impact	Service Hour Impact (2017)	PM Peak Bus Requirements
Weekday - Increase frequency from 30 minutes to 20 minutes between 6pm and 9pm.	1,512	492	0

#### **Route 15/21**

##### ***Proposed Service Changes:***

1. Weekday - Reduce headway from 30 minutes to 20 minutes between 6 pm and 9 pm

##### ***Issue/Rationale:***

The Route Structure and Service Guidelines Review recommended reducing headways from 30 minutes to 20 minutes between 6 pm and 9 pm. The route is currently performing above minimum productivity targets during this time period. In particular, Route 21 during the early evening period is one of the most productive routes in the system. The headway reduction adds service during a high-ridership and low service time period and will help reduce overcrowding.

##### ***Impacts:***

Proposed Service Change	Annual Service Hour Impact	Service Hour Impact (2017)	PM Peak Bus Requirements
Weekday - Increase frequency from 30 minutes to 20 minutes between 6 pm and 9 pm	1,512	492	0

*Proposals based on the Annual Service Planning Review Process*

The following recommendations come from input from Operators, the public and current operational concerns. The proposed changes are intended to simplify the system, improve schedule adherence and/or address overcrowding concerns.

**Routing Modifications**

**Route 3**

***Proposed Service Changes:***

1. Sunday – Remove routing from Dufferin Ave.

***Issue/Rationale:***

Currently Route 3 has a modified routing on Sunday, in which it operates along Dufferin instead of Queens. The deviation was intended to provide service to St. Peter’s Cathedral however, the stop at Dufferin and Richmond at the Cathedral has limited ridership. By removing the Sunday deviation to Dufferin, directness of service is improved and a greater simplicity and consistency in routing is achieved. Both of these results are goals of the LTC’s Route Structure and Service Review.

Additionally, connectivity will be maintained on Sunday with the new transfer point at Queens & Richmond with the removal of buses off Dundas. It is recommended that this change be made in April to coincide with the buses off Dundas transition.

***Impacts:***

The route modification would incur an additional three minute walk from St. Peter’s Cathedral to a transit stop however, consistent routing would be continued throughout the week and timed connections would be maintained at Richmond and Queens.

Proposed Service Change	Annual Service Hour Impact	Service Hour Impact (2017)	PM Peak Bus Requirements
Sunday - Remove routing from Dufferin Ave.	0	0	0

**Route 3, Route 5, Route 11, Route 15/21, Route 23, Route 24**

***Proposed Service Changes:***

1. Route 3
  - a. Interline every other Route 3 with a Route 5. See Figure I
2. Route 5
  - a. Introduce an alternating A and B branch routing between Wonderland and Greenwood. Branch A would operate along Springbank following the existing daytime alignment. Branch B would largely follow current evening routing through Berkshire, Gardenwood and Kernohan Parkway.
  - b. Interline Route 5 with every other Route 3. See Figure I
3. Route 11
  - a. Weekday – Increase frequency from 30 min to 20 min (7 am to 9:30 am and 2 pm to 6 pm).
  - b. Re-route Route 11 to Topping La., Berkshire Dr., and Robin Rd.
  - c. Remove Route 11 service from Cranbrook Road. See Figure II
4. Route 10
  - a. Remove evening deviation to Teeple Terrace. See Figure II
5. Route 15/21
  - a. Operate the Farnham/Dalhousie loop as a branch on alternate Route 15 trips.
  - b. Introduce service to Viscount, Cranbrook, and Commissioners (currently served by Route 11) on alternating Route 15 trips. See Figure II
6. Route 23
  - a. Eliminate Route 23. See Figure II
7. Route 24
  - a. Re-route to Wonderland and Commissioners. See Figure II
  - b. Decrease frequency to 35 minutes weekdays between 3 pm and 6 pm

**Issue/Rationale:**

Route 23 is a Minor Arterial route providing service from Westmount Mall to Downtown. The route largely duplicates other existing service in an area with modest service productivity.

The predominant origin/destination of ridership on the route stems from the two terminus points. Ridership to/from Westmount Mall, Downtown and Wonderland Rd just north of Westmount comprises 65% of the total ridership. The ridership share is 27% from the Westmount Mall area and 38% from the downtown. Routes 11 and 15 also service the same two terminus locations. In particular, Route 11 operates on the same roads as Route 23 where ridership is highest. Route 5 duplicates Route 23's service to the west of downtown. Additionally, Routes 5, 10 and 15 all currently deviate off regular routing to cover areas of Route 23 during time periods when it does not operate.

The proposed changes maintain all but a small segment of Route 23's 400m service coverage area with a minor reduction in direct service.

By eliminating Route 23, frequency can be increased on the more productive Route 7/11 and service redistributed to an area with greater demand in East London.

The route modification for Route 11 helps replace Route 23 service coverage in the Teeple Terrace and Berkshire Dr. area. By also removing the loop along Cranbrook and Commissioners west of Wonderland, the route provides a more direct service to downtown. The direct service is particularly significant as Route 11 would replace Route 23 as the fastest route between Westmount Mall/Wonderland Rd and downtown.

Due to the changes proposed to Route 11, Route 10 does not need to deviate to serve Teeple Terrace during evenings, Monday to Saturday and all day Sunday. This will improve Route 10's service reliability as the existing round trip time will be maintained during these periods.

By operating an A and B branch routing on Route 5, Route 23's service coverage is maintained along Gardenwood Rd. and Route 5's service coverage is maintained on Springbank Rd. The use of Kernohan Parkway instead of Ridgewood and Greenwood on the B segment creates more direct service and reduces time travel while having a marginal impact on service coverage.

A challenge of Route 5's A and B branch routing is insufficient round trip time in the peak pm period. Interlining Route 5 with Route 3 would provide a cost-neutral solution by streamlining the routing through downtown. An interlined 3 and 5 would have the added benefits of creating a direct east-west route between Byron and East London, as well as more effectively utilizing extra time available on Route 3.

In order to ensure service coverage is maintained for passengers along Farnham and Dalhousie, as well as through the Cranbrook loop, it is proposed that an A/B branch be established on Route 15. Route 15A would serve the Farnham/Dalhousie loop during all time periods; currently Route 15 operates along this alignment evenings and Sundays. Route 15B would serve the Cranbrook loop along the existing alignment of Route 11. As Route 15 operates on a 15 minute frequency during the weekdays between 6 am and 6 pm a frequency of 30 minutes in each of the loops will be maintained during the highest ridership periods. There would be a reduction of frequency on each of the loops from 30 to 40 minutes during Saturday daytimes and from 30 to 60 minutes during evenings and Sunday time periods.

The additional travel time caused by the introduction of the branch routing on the 15 during daytime periods requires an additional bus between 7 am to 9 am and 12 pm to 6 pm on weekdays and between 12 pm to 6 pm on Saturdays, which is accommodated by the elimination of Route 23.

East of Westmount, routing the 24 along Commissioners between Viscount and Wonderland would decrease transit times, provide service to a higher density and more transit-oriented population and marginally improve service coverage by operating along an un-serviced section of Commissioners between Andover and Viscount. Removal of Route 24 service from Viscount would have limited impact on service coverage and would eliminate service duplication as the area is already served by Routes 12 and 15.

Even with travel time savings due to the route modification, there is insufficient round trip time available on Route 24 during peak pm periods. Since Route 24 has extremely low levels of productivity, decreasing frequency between 3 pm and 6 pm would be the most efficient solution.

**Impacts:**

A concern with an interlined Route 3 and 5 is that the two routes operate on different frequencies, 15 minutes on Route 3 and 30 minutes on Route 15 therefore, not every Route 3 would continue as a Route 5. This has the potential to create confusion for passengers. However, a precedent does exist in the interlined Route 7 & 11, with every other Route 7 short-turning in the downtown core during late evening periods. In order to reduce potential confusion, Route 5 would only interline with one branch of Route 3. Additionally, signage on the bus would clearly indicate if the bus is continuing. The benefits of being able to maintain schedule adherence while more efficiently utilizing existing resources outweighs the potential concerns associated with the offset route interline.

The elimination of Route 23 and routing modification on Route 11 improves service coverage in certain areas but does reduce service coverage along Applewood south of Teeple Terrace. The area outside the 400 meter walking distance is small and has relatively low ridership; approximately 14 boardings per day.

Direct service is removed from several areas. The most notable are Base Line at Delta PI and on Berkshire between Robin and Gardenwood that comprise significant areas of ridership. However, both areas are well within LTC's service standard of 400 meters to a transit stop to another direct route.

Residents along the eastern section of Applewood Crescent are now within 400 meters of a transit stop with the proposed routing modification.

Proposed Service Change	Annual Service Hour Impact	Service Hour Impact (2017)	PM Peak Bus Requirements
<b>Route 3 &amp; 5</b> - Interline Route 3 and 5.	0	0	0
<b>Route 5</b> - Route Modification – Modify route to alternate between an A and B routing. 5A would operate only on Springbank between Horton and Wonderland. 5B would operate through Springbank Dr. Berkshire Dr., Gardenwood Dr., Ridgewood Cr., Kerohan Pwky and Springbank Dr.	0	0	0
<b>Route 10</b> - Route Modification - Remove evening and Sunday loop on Teeple Terrace and Berkshire Dr.	0	0	0
<b>Route 11</b> - Route Modification – Modify route to Topping La., Berkshire Dr. and Robin Rd., between Commissioners and Base Line Rd. Remove service from Viscount, Cranbrook, and Commissioners.	0	0	0
<b>Route 7/11</b> - Weekday – Increase frequency from 30 minutes to 20 minutes during peak periods. (7 am to 9 am and 2 pm to 6 pm).	3,024	2,296	2
<b>Route 15/21</b> - Operate the Farnham/Dalhousie loop as a branch on alternate Route 15 trips during Weekday and Saturday daytime periods. (6 am to 6 pm)	2,328	758	1
<b>Route 15/21</b> - Modify route to serve Viscount, Cranbrook and Commissioners (currently served by Route 11) on alternating Route 15 trips	0	0	0
<b>Route 23</b> - Eliminate Route	-7,659	-2,494	-2
<b>Route 24</b> - Route Modification – Modify route to Wonderland and Commissioners.	0	0	0
<b>Route 24</b> - Weekday – Decrease frequency from 30 min to 35 during PM peak periods (3 pm to 6 pm).	0	0	0

## **Route 7**

### ***Proposed Service Changes:***

1. Modify route to operate between Argyle Mall and Downtown directly, serving Wavell between Clarke Rd. and Dundas St. only once. See Figure III

### ***Issue/Rationale:***

Between Argyle Mall and Downtown, Route 2 faces high ridership causing overcrowding and schedule adherence issues. Route 7 is currently an option for riders travelling between these two locations; however, Route 7's indirect travel reduces its' appeal to Route 2 riders.

By modifying the alignment of Route 7 to serve Argyle Mall directly, it is anticipated that some overcrowding issues on Route 2 will be alleviated. Additionally, passengers on Wavell between Clarke Rd. and Dundas St. will continue to have direct service. As a result of changes in Westmount to the interlined Route 11, Route 7 will have increased frequency in peak periods further encouraging riders to ride Route 7 as an alternative to Route 2.

### ***Impacts:***

The route modification would impact 60 passengers originating or destined for Wavell St. between Clarke Rd. and Dundas St. who currently have direct service to and from Downtown and would face an additional travel time of 6 minutes. Depending on where these passengers access the bus, they would have nearby direct options within a 400 meters walk.

By providing another direct service to Argyle Mall as an alternative to Route 2, there is the benefit of potentially reducing overcrowding concerns on Route 2 while increasing ridership on Route 7.

Proposed Service Change	Annual Service Hour Impact	Service Hour Impact (2017)	PM Peak Bus Requirements
Route Modification- Modify route to serve Argyle Mall before and after serving the Nelson Park Wavell loop.	0	0	0

**Route 17B**

***Proposed Service Changes:***

1. Modify route to Westdel Bourne in Riverbend. See Figure IV

***Issue/Rationale:***

Final routing for Riverbend was initially intended to run from Kains Rd. to Westdel Bourne to Shore Rd to Riverbend Road to Oxford and back to Byron. Due to phasing of the Riverbend development, the initial and current routing for the area made a shorter loop. The Riverbend development is now reaching full build out justifying a routing change to more closely match the final routing. The change would require the addition of a bus during the AM Peak to increase round trip time and maintain the current frequency. The change has the potential to increase ridership by serving an area that is currently outside of the 400 meter standard walk distance.

***Impacts:***

The proposed routing would not remove any currently served area out of a 400m walk distance and would expand service coverage to several unserved areas.

Proposed Service Change	Annual Service Hour Impact	Service Hour Impact (2017)	PM Peak Bus Requirements
Route Modification – Modify route to Westdel Bourne in Riverside	1,008	328	0

**Route 20**

***Proposed Service Changes:***

1. Operate Oakcrossing loop during weekday evening and weekend daytime periods. (Weekday 6 pm to 10 pm, Saturday 6 am to 6 pm, Sunday 8 am to 6 pm)

***Issue/Rationale:***

Numerous service requests have been received to introduce service to the Oakcrossing loop during weekday evenings and weekends. The introduction of Route 29 weekday late evening and weekend service offers Capulet Lane with service during these times, providing an opportunity to modify Route 20 to serve the Oakcrossing Loop.

The proposed changes would require extended round trip times. To ensure an appropriate recovery time, an increase in frequency from 30 minutes to 20 minutes is proposed during the weekday evening period. During Saturday daytime periods (9 am to 6 pm), a frequency increase from 20 minutes to 15 minutes is proposed. The extended round trip time on Sunday would result in one additional bus with the same frequency being maintained.

The frequency increases would occur during highly productive time periods for Route 20.

***Impacts:***

The proposed route modification would result in service decrease to the high ridership area of Capulet Lane during weekends, Frequency would decrease from 20 and 30 minutes in the peak periods on Saturday and Sunday respectively to 35 minutes.

By extending hours of service into a highly requested area, there is a potential to increase ridership, while still providing service to the Capulet Lane area.

Proposed Service Change	Annual Service Hour Impact	Service Hour Impact (2017)	PM Peak Bus Requirements
Route Modification - Operate Oakcrossing loop during weekday evening periods (6 pm to 10 pm)	2,016	656	0
Route Modification - Operate Oakcrossing loop during Saturday daytime periods (6 am to 6 pm).	1,040	340	0
Route Modification - Operate Oakcrossing loop during Sunday daytime periods (9 am to 6 pm)	558	207	0

## Frequency and Running Time Improvements

### Route 2

#### **Proposed Service Changes:**

1. Weekday - Increase round trip time from 105 minutes to 120 minutes in the base am period. (10 am to 12 pm)
2. Weekday - Increase frequency from 30 minutes to 20 minutes during the late evening period. (9 pm to 12 am)
3. Saturday - Increase round trip time from 105 minutes to 120 minutes during the peak period. (12 pm to 6 pm)
4. Saturday - Increase round trip time from 90 minutes to 105 minutes during the early evening period. (6 pm to 9 pm)

#### **Issue/Rationale:**

Route 2 currently experiences time travel constraints during multiple time periods. Adding a vehicle weekdays between 10 am and 12 pm and Saturdays between 12 pm and 9 pm is anticipated to improve schedule adherence.

In addition to increasing running time during the weekday late evening period, there is also an opportunity to improve frequency from 30 minutes to 20 minutes along the corridor. (40 minutes in the branches)

#### **Impacts:**

Proposed Service Change	Annual Service Hour Impact	Service Hour Impact (2017)	PM Peak Bus Requirements
Weekday - Increase round trip time from 105 minutes to 120 minutes between 10 am and 12 pm	508	164	0
Weekday - Increase frequency from 30 minutes to 20 minutes during the late evening period. (9 pm to 12 am)	1,512	492	0
Saturday - Increase round trip time from 105 minutes to 120 minutes during the peak period. (12 pm to 6 pm)	312	102	0
Saturday - Increase round trip time from 90 minutes to 105 minutes during the early evening period. (6 pm to 9 pm)	156	51	0

### Route 4

#### **Proposed Service Changes:**

1. Weekday – Increase round trip time from 105 to 120 minutes during PM peak periods (4 to 6 pm)
2. Saturday – Increase round trip time from 90 to 100 minutes between 12 pm and 9 pm; frequency increases from 30 to 25 minutes as a result

#### **Issue/Rationale:**

Route 4 currently has service reliability issues during the weekday PM peak period and on Saturday afternoons and evenings. Adding a vehicle to the route will improve schedule adherence.

**Impacts:**

Proposed Service Change	Annual Service Hour Impact	Service Hour Impact (2017)	PM Peak Bus Requirements
Weekday - Increase round trip time from 105 minutes to 120 minutes during the pm peak period. (4 pm to 6 pm)	504	164	1
Saturday - Increase frequency from 30 minutes to 25 minutes during peak pm and early evening periods. (12 pm to 9 pm)	468	153	0

**Route 6**

**Proposed Service Changes:**

1. Weekday – Increase round trip time from 90 to 100 minutes during PM peak periods (2 to 6 pm); frequency increases from 30 to 25 minutes as a result.
2. Saturday – Increase round trip time from 80 to 100 minutes during PM peak periods (12 to 6 pm); frequency increases from 30 to 20 minutes as a result.

**Issue/Rationale:**

Route 6 currently experiences service reliability issues during the weekday PM peak period and on Saturday afternoons. Adding a vehicle to the route will improve schedule adherence.

**Impacts:**

Proposed Service Change	Annual Service Hour Impact	Service Hour Impact (2017)	PM Peak Bus Requirements
Saturday - Increase round trip times from 80 minutes to 100 minutes during peak pm periods. (12 pm to 6 pm)	312	102	0
Weekday - Increase frequency from 30 minutes to 25 minutes during peak pm periods. (2 pm to 6 pm)	1008	328	1

**Route 12**

**Proposed Service Changes:**

1. Weekday – Increase round trip time from 60 to 80 minutes from 4 to 6 pm

**Issue/Rationale:**

Route 12 currently experiences service reliability issues during the weekday PM peak period. Adding a vehicle to the route during these times will improve schedule adherence and provide sufficient layovers.

**Impacts:**

Proposed Service Change	Annual Service Hour Impact	Service Hour Impact (2017)	PM Peak Bus Requirements
Weekday - Increase round trip time from 60 minutes to 80 minutes during the peak pm period. (4 pm to 6 pm)	504	164	1

**Route 16**

**Proposed Service Changes:**

2. Weekday – Increase round trip time from 100 to 120 minutes from 1 to 2 pm
3. Saturday – Increase round trip time from 90 to 100 minutes from 8 to 10 am; frequency increases 30 to 25 minutes as a result

**Issue/Rationale:**

Route 16 currently experiences service reliability issues during the weekday early afternoon and Saturday early morning periods. Adding a vehicle to the route during these times will improve schedule adherence.



**Impacts:**

Proposed Service Change	Annual Service Hour Impact	Service Hour Impact (2017)	PM Peak Bus Requirements
Weekday - Increase round trip time from 100 minutes to 120 minutes during base noon periods. (1 pm to 2 pm)	252	82	0
Saturday - Increase frequency from 30 minutes to 25 minutes between 8 am and 10 am	104	34	0

**Route 17**

**Proposed Service Changes:**

1. Weekday - Increase round trip time from 120 minutes to 140 minutes between 2 pm and 4 pm

**Issue/Rationale:**

Route 17 currently experiences service reliability issues during the base pm. The addition of a vehicle to the route will improve schedule adherence.

**Impacts:**

Proposed Service Change	Annual Service Hour Impact	Service Hour Impact (2017)	PM Peak Bus Requirements
Weekday - Increase round trip time from 120 minutes to 140 minutes between 2 pm and 4 pm	504	164	0

**Route 27**

**Proposed Service Changes:**

1. (Fall/Winter Only) Saturday – Provide 40 minute frequency during peak and early evening periods (11 am to 9 pm)

**Issue/Rationale:**

Saturday productivity is high on routes serving a similar area as Route 27. The introduction of Saturday service is projected to lead to high levels of ridership. This projection is supported by considerable feedback in support of weekend Route 27 service.

**Impacts:**

Proposed Service Change	Annual Service Hour Impact	Service Hour Impact (2017)	PM Peak Bus Requirements
Saturday - Introduce service in the peak and early evening periods on a 40 minute frequency (11 am to 9 pm) Fall/Winter Only	520	170	0

**Route 29**

**Proposed Service Changes:**

1. (Fall/Winter Only) Weekday – Increase frequency from 15 minutes to 12 minutes between 7 am and 12 pm
2. (Fall/Winter Only) Weekday - Increase frequency from 20 minutes to 12 minutes between 8 pm and 10:30 pm.
3. (Fall/Winter Only) Extend Monday-Thursday schedule to Friday.
4. (Fall/Winter Only) Introduce Saturday service between 12 pm and 9 pm on a 35 minute frequency.
5. (Fall/Winter Only) Introduce Sunday service between 1 pm and 9 pm on a 35 minute frequency.

**Issue/Rationale:**

Route 29 during weekday evening and weekend periods has high ridership growth potential justifying service introduction and increases. Increasing Route 29 service also reduces ridership pressure on Route 10 in the University area which experiences overcrowding issues and conflict between short and long distance riders.

With the exception of the afternoon period, there is an excessive amount of round trip time. Reducing headways from 15 minutes to 12 minutes would reduce recovery time closer to 10% of round trip time. Due to the non-arterial and student-orientated nature of the route, clock-face headways are less important.

Transfers are not a priority and the majority of passengers are using real time information to determine when buses will arrive.

**Impacts:**

Proposed Service Change	Annual Service Hour Impact	Service Hour Impact (2017)	PM Peak Bus Requirements
Weekday - Increase frequency from 15 minutes to 13 minutes during peak pm periods. (4 pm to 6 pm) Fall/Winter Only	308	156	1
Weekday - Increase frequency from 15 minutes to 12 minutes during AM and base periods (7 am to 12 pm) Fall/Winter Only	0	0	0
Extend Monday-Thursday Schedule to Friday Fall/Winter Only	185	94	0
Weekday - Increase frequency from 20 minutes to 13 minutes between 8pm and 10pm. Fall/Winter Only	308	156	0
Saturday - Introduce service in the peak and early evening periods on a 35 minute frequency (12 pm to 9 pm). Fall/Winter Only	243	135	0
Sunday - Introduce service in the peak and evening periods on a 35 minute frequency (1 pm to 9 pm). Fall/Winter Only	264	144	0

**Route 33**

**Proposed Service Changes:**

1. (Fall/Winter Only) Weekday – Decrease frequency from 15 minutes to 17 minutes between 7 am and 2 pm.
2. (Fall/Winter Only) Weekday – Increase frequency from 30 minutes to 17 minutes between 6 pm and 9 pm.
3. (Fall/Winter Only) Extend Monday-Thursday schedule to Friday:
4. (Fall/Winter Only) Weekday – Increase frequency from 15 minutes to 13 minutes between 1 pm and 6 pm.

**Issue/Rationale:**

Currently, Route 33 has insufficient round trip time between 7am and 2pm and after 6:45pm. Decreasing frequency between 7 am and 2 pm would provide sufficient round trip time with no service hour increase and a marginal impact on ridership.

The early evening period (6pm-9pm) is one of Route 33’s highest performing time periods. It is therefore recommended to address the runtime concerns in this period with an increase in frequency.

During the peak pm period (2pm-6pm), there is an excessive amount of round trip time causing layovers of 24%. Reducing headways from 15 minutes to 13 minutes would reduce layovers to 13%.

Since Route 33 is not an arterial route, maintaining clockface headways for transfers should not be considered a priority. Additionally, the ridership on the route is highly university oriented, who depend more heavily on real time information than on paper schedules.

**Impacts:**

Proposed Service Change	Annual Service Hour Impact	Service Hour Impact (2017)	PM Peak Bus Requirements
Weekday – Increase frequency from 15 minutes to 13 minutes during the pm periods (1 pm to 6 pm)	0	0	0
Weekday – Decrease frequency from 15 min to 17 min during am and base periods (7 am to 2 pm). Fall/Winter Only	0	0	0
Weekday - Increase frequency from 30 min to 17 min during the early evening period (6 pm to 9 pm). Fall/Winter Only	462	234	0
Extend Monday-Thursday schedule to Friday. Fall/Winter Only	77	39	0

## **Route 90**

### ***Proposed Service Changes:***

1. Weekday – Increase frequency from 20 minutes to 15 minutes during the base period. (11 am to 2 pm)
2. Weekday – Increase round trip time from 75 to 90 minutes in the PM peak period (4 to 6 pm)
3. Weekday – Introduce 35 minute frequency during the early evening period. (6:30 pm to 9 pm)
4. Saturday – Increase round trip time from 60 to 75 minutes in the afternoons (2 to 6 pm); frequency increases from 30 to 25 minutes as a result.
5. Sunday – Increase frequency from 30 minutes to 20 minutes (11 am to 6 pm).
6. Sunday – Introduce 30 minute frequency in the early evening period. (6 pm to 7 pm)

### ***Issue/Rationale:***

The corridor along which Route 90 operates currently has very high productivity levels during the weekday early evening period. The introduction of express service between 6:30 pm and 9 pm is projected to result in sizable ridership growth and help alleviate overcrowding on other corridor routes such as Route 13.

The weekday base and Sunday peak periods experience productivity well above minimum targets. A frequency increase during these times is expected to be a strong generator of ridership growth and help alleviate overcrowding on the corridor. The frequency increase in the weekday base period has the added benefit of creating an even level of service throughout the daytime.

Route 90 has insufficient round trip time on Weekdays between 4 and 6pm and on Saturdays between 10 am and 6pm. On weekdays, adding one bus and maintaining frequency will provide sufficient layover. Expanding round trip time to 75 minutes on Saturdays and increasing frequency to 25 minutes will improve schedule adherence and avoid excessive layovers.

### ***Impacts:***

Proposed Service Change	Annual Service Hour Impact	Service Hour Impact (2017)	PM Peak Bus Requirements
Weekday - Increase frequency from 20 minutes to 15 minutes during the base period. (11 am to 2 pm)	756	246	0
Weekday - Increase round trip time from 75 minutes to 90 minutes during the pm peak period. (4 pm to 6 pm)	504	164	1
Weekday - Introduce 35 minute frequency during the early evening period. (6:30 pm to 9 pm)	1,260	410	0
Saturday – Increase frequency from 30 minutes to 25 minutes during pm peak period. (10 am to 6 pm)	416	164	0
Sunday - Increase frequency from 30 min to 20 min (11 am to 6 pm).	434	161	0
Sunday- Introduce 30 minute frequency in the early evening period (6 pm to 7 pm)	62	23	0

## **Route 91**

### ***Proposed Service Changes:***

1. Saturday – Introduce 25 minute frequency during peak periods and early evening periods. (11 am to 9 pm)
2. Sunday – Introduce 25 minute frequency during peak periods and early evening periods. (12 pm to 8 pm)

### ***Issue/Rationale:***

The Oxford corridor, along which Route 91 operates, currently has high productivity levels during weekend peak and early evening periods. The introduction of service on Route 91 during these periods is projected to result in sizable ridership growth and help alleviate overcrowding on other corridor routes such as Routes 4 and 17. The high levels of productivity seen on the newly introduced Route 90 weekend service add confidence to that projection.

**Impacts:**

Proposed Service Change	Annual Service Hour Impact	Service Hour Impact (2017)	PM Peak Bus Requirements
Saturday – Introduce 25 minute frequency during peak periods and early evening periods. (11 am to 9 pm)	1040	340	0
Sunday – Introduce 25 minute frequency during peak periods and early evening periods. (12 pm to 8 pm)	992	368	0

**Route 102**

**Proposed Service Changes:**

1. (Fall/Winter Only) Weekday – Increase round trip times from 48 minutes to 60 minutes between 4 pm to 6 pm.
2. (Fall/Winter Only) Weekday - Increase frequency from 45 minutes to 22 minutes between 6 pm and 9 pm.
3. (Fall/Winter Only) Weekday – Introduce service on a 40 minute frequency between 9 pm and 11:30 pm
4. (Fall/Winter Only) Saturday – Introduce service on a 40 minute frequency between 11 am and 11 pm.
5. (Fall/Winter Only) Sunday – Introduce service on a 40 minute frequency between 11 am and 10 pm
6. (Fall/Winter Only) Extend Monday-Thursday schedule to Friday.

**Issue/Rationale:**

Travel time constraints, high productivity and high ridership growth potential justifies a significant service hour increase on the route.

Route 102 currently faces service reliability issues during the weekday peak pm period. Adding a vehicle to the route during this time will improve schedule adherence.

Projected ridership growth per service hour for the Route 102 & 106 during evening periods from Monday to Saturday are amongst the top 10 in the route/time period category. Current ridership per revenue service hour for the early evening period is high at 125 between 6pm and 7pm and ranges from 75 to 88 between 7pm and 10:30pm. Weekend peak periods also have high projected ridership growth rates. The weekend service hours start later in the day to mirror current ridership patterns in the area on Routes 2, 6 & 13.

Frequency increases and time period expansion on the Route 102/106 will help to alleviate overcrowding and improve schedule adherence on the heavily used Routes 2, 6 and 13.

**Impacts:**

Proposed Service Change	Annual Service Hour Impact	Service Hour Impact (2017)	PM Peak Bus Requirements
Weekday – Increase frequency from 15 minutes to 12 minutes between 11 am and 2 pm. Fall/Winter Only	462	234	0
Weekday – Increase round trip times from 48 minutes to 60 minutes during the pm peak period. (4 pm to 6 pm). Fall/Winter Only	308	156	1
Weekday – Increase frequency from 45 minutes to 22 minutes during the early evening period (6 pm to 9 pm). Fall/Winter Only	462	234	0
Weekday - Introduce 40 minute frequency during late evening periods (9 pm to 11:30 pm). Fall/Winter Only	385	195	0
Saturday – Introduce service on a 40 minute frequency between 11 am and 11 pm. Fall/Winter Only	324	180	0
Sunday – Introduce service on a 40 minute between 11 am and 10 pm. Fall/Winter Only	363	198	0

## **Route 106**

### ***Proposed Service Changes:***

1. (Fall/Winter Only) Weekday – Increase round trip times from 40 minutes to 50 minutes between 4 pm to 6 pm.
2. (Fall/Winter Only) Weekday - Increase frequency from 45 minutes to 20 minutes between 6 pm and 9 pm.
3. (Fall/Winter Only) Weekday - Provide 40 minute frequency during late evening periods (9 pm to 11:30 pm)
4. (Fall/Winter Only) Saturday – Introduce service on a 40 minute frequency between 11 am and 11 pm
5. (Fall/Winter Only) Sunday – Introduce service on a 40 minute frequency between 11 am and 10 pm
6. (Fall/Winter Only) Extend Monday-Thursday schedule to Friday.

### ***Issue/Rationale:***

Travel time constraints, high productivity and high ridership growth potential justifies a significant service hour increase on the route.

Route 106 currently faces service reliability issues during the weekday peak pm period. Adding a vehicle to the route during this time will improve schedule adherence.

Current ridership per revenue service hour for the early evening period is high at 125 from 6pm to 7pm and ranging from 75 to 88 between 7pm to 10:30pm. Weekend peak periods also have high projected ridership growth rates. The weekend service hours start later in the day to mirror current ridership patterns in the area on Route 2, 6 & 13.

Frequency increases and time period expansion on the Route 102/106 will help to alleviate overcrowding and decrease travel times on the heavily used Routes 2, 6 and 13.

### ***Impacts:***

Proposed Service Change	Annual Service Hour Impact	Service Hour Impact (2017)	PM Peak Bus Requirements
Weekday – Increase round trip times from 40 minutes to 50 minutes during the pm peak period. (4 pm to 6 pm). Fall/Winter Only	308	156	1
Weekday – Increase frequency from 40 minutes to 20 minutes during the early evening period (6 pm to 9 pm). Fall/Winter Only	462	234	0
Weekday – Introduce service on a 35 minute frequency between 9 pm and 11:30pm. Fall/Winter Only	385	195	0
Saturday – Introduce service on a 35 minute frequency between 11 am and 11 pm. Fall/Winter Only	324	180	0
Sunday – Introduce service on a 35 minute frequency between 11am and 10 pm. Fall/Winter Only	363	198	0
Extend Monday-Thursday schedule to Friday. Fall/Winter Only	370	187	0

Figure I- Proposed Routing Modifications for Routes 3 & 5

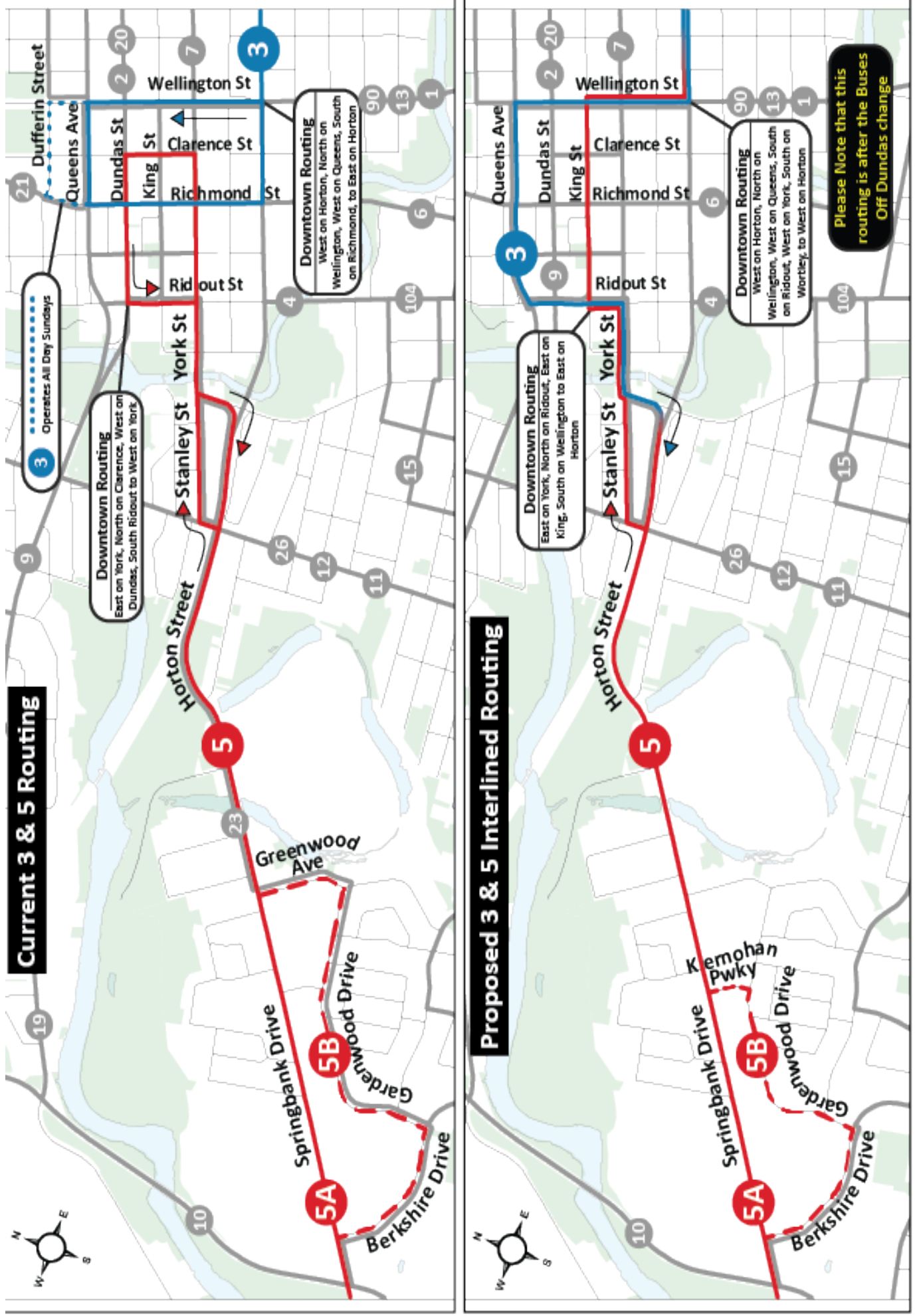


Figure 1- Proposed Westmount Area Routing Modifications

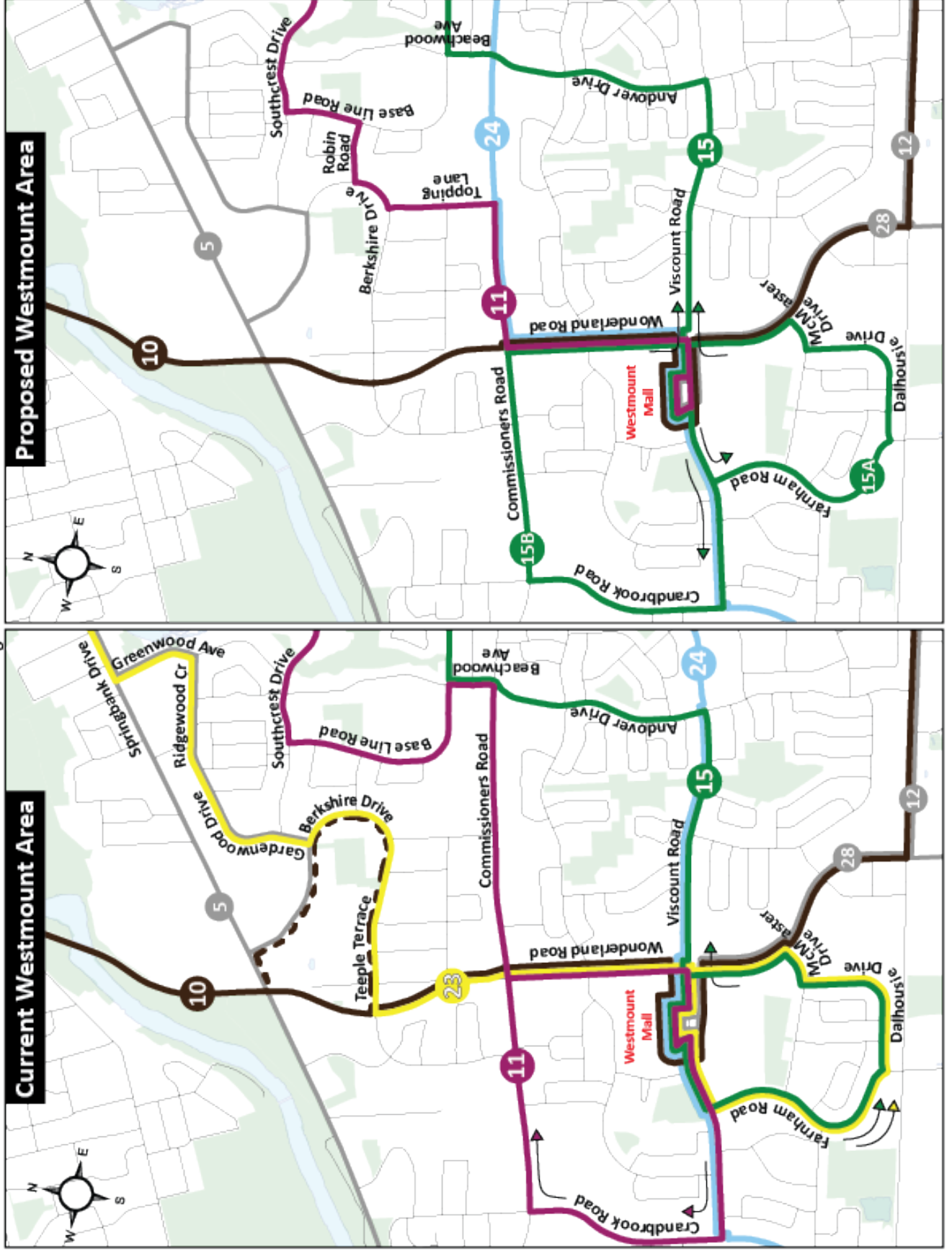


Figure III- Proposed Routing Modifications for Route 7

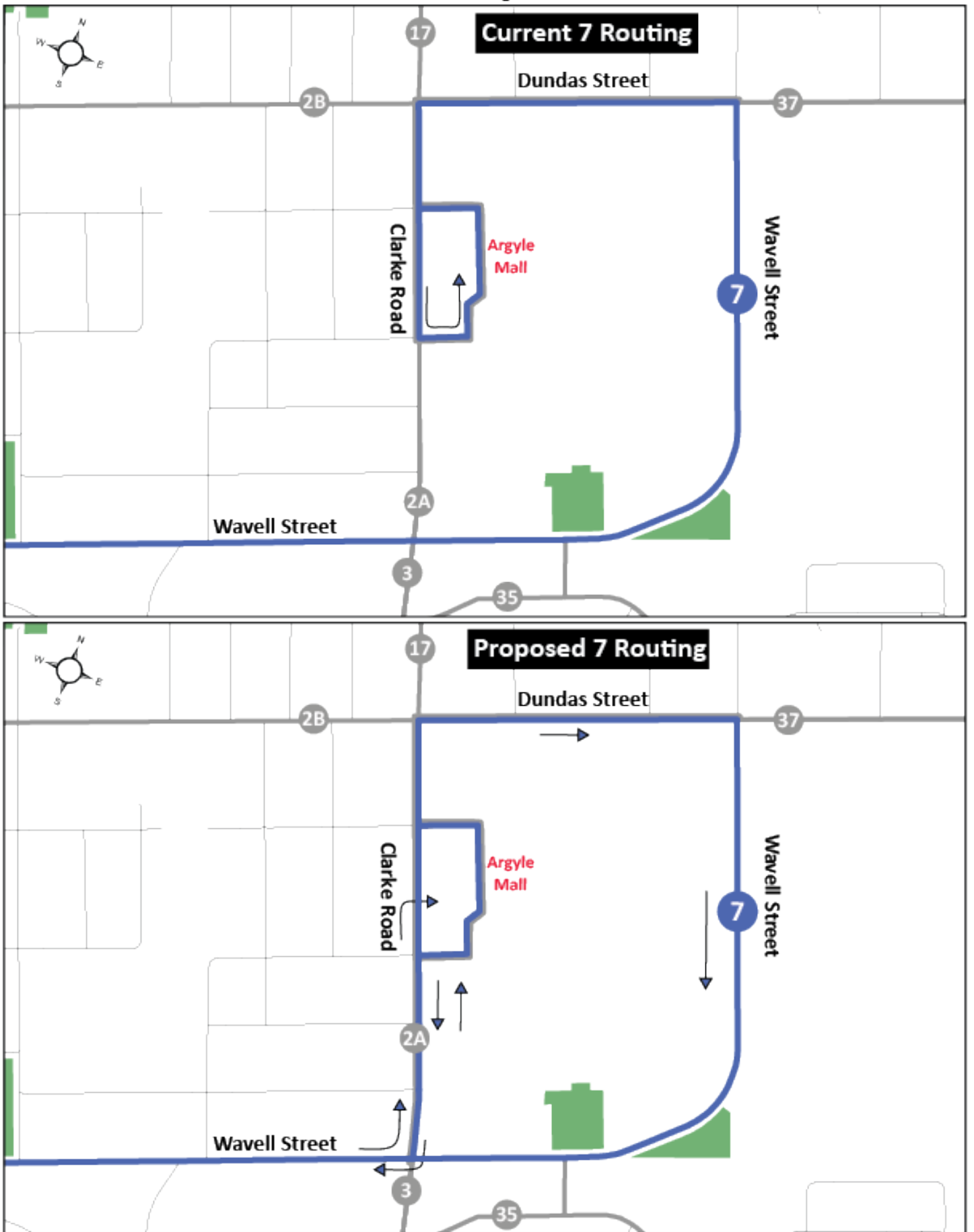
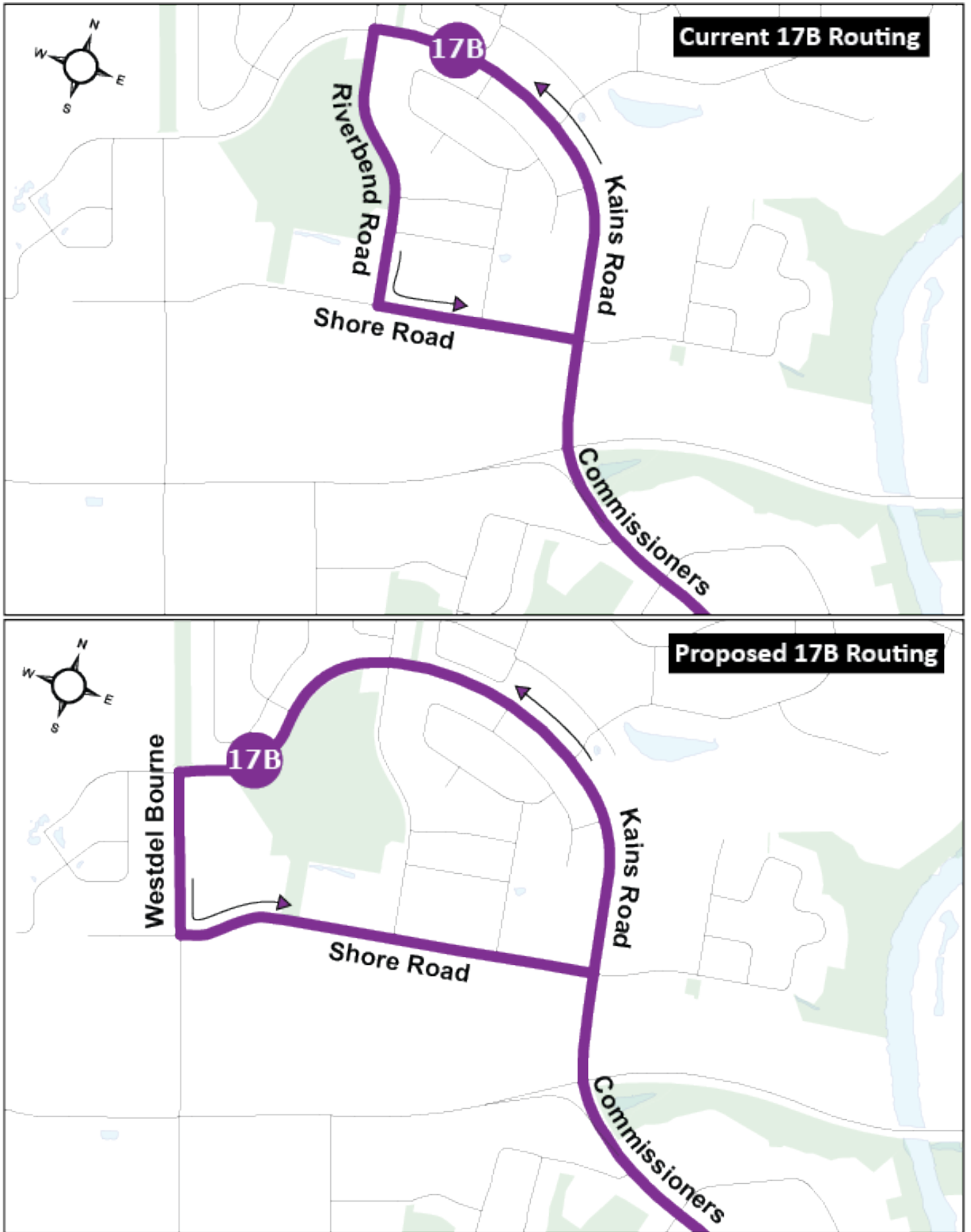




Figure IV- Proposed Routing Modifications for Route 17B



## 12 Month Assessment of 2016 Service Changes

September 2016 saw the most significant changes to the transit system in recent London Transit history. Changes were made to 27 routes, including routing modifications, frequency adjustments and operational changes. The changes added 17,487 annual service hours and accounted for over 76,000 hours of changes to the system. Since the implementation of the 2016 Service Plan, performance standards and ridership have been monitored over a 12 month period in accordance with the Route Structure and Service Guidelines document.

Overall the 2016 changes were well received and are performing above current boardings per revenue-vehicle-hour performance standards. As anticipated with changes of this magnitude, some modifications experienced mixed reviews from public feedback and not all achieved the intended outcome of either reducing overcrowding or improving schedule adherence. In most instances the identified issues have been addressed, or will be addressed with subsequent service plan changes.

Table I sets out the performance for each of the routes that had service changes as part of the 2016 service plan and includes an assessment based on ridership, schedule adherence, public feedback and the overall assessment of the changes.

**Table I – 2016 Service Change Assessment**

Route & Description of Change	Service Period	Ridership			Schedule Adherence	Assessment of Changes				Status
		Change in Boardings	Productivity (B/ RV/H)	Productivity Standard	Change in % Late	Ridership	Adherence	Public Feedback	Overall Assessment	
1 Schedule	ANNUAL AVERAGE		35.0							Reliability improved, ridership should improve in response to this
	M-F: 7AM-2PM	-60	38.6	20	-2.9%	●	●			
	M-F: 6-9PM	24	32.9	15	-22.4%	●	●	●		
	SAT: 8-10AM	-42	20.3	15	-5.0%	●	●			
	SAT: 6-9PM	78	37.0	15	-16.4%	●	●			
	SUN: 9AM-7PM	91	29.6	15	-17.7%	●	●			
2 Routing	ANNUAL AVERAGE		65.0							Change to 2A Routing in 2017 Service Plan should improve service & ridership Addressed in 2017 Service Plan
	M-F	-463	70.3	50	3.9%	●	●	●	●	
	SAT	-537	66.7	30	4.7%	●	●			
	SUN	-411	78.3	20	28.3%	●	●			
	SUMMER M-F PEAKS	508	54.5	50		●				
102/106 (2C/6A) New Route	ANNUAL AVERAGE		93.0					●	●	
	M-F	3849	92.6	20		●				
18 Eliminate	ANNUAL AVERAGE							●	●	
	M-F	-3605								
3 Routing	ANNUAL AVERAGE		35.0							
	M-F (BEFORE 6PM)	218	38.8	25	-4.0%	●	●			
	M-F (AFTER 6PM)	149	28.6	20	3.1%	●	●			
	SAT	202	30.1	20	2.4%	●	●			
	SAT: 6-8AM	16	12.2		2.2%	●	●			
	SUN	667	36.2	15	0.8%	●	●			
4 Routing	ANNUAL AVERAGE		60.0							Ridership loss Mon-Sat was by design and accounted for by Route 104. Saturday schedule adherence is addressed in 2018 Service Plan; Sunday schedule adherence needs to be monitored.
	M-F	-1357	61.1	25	-3.1%	●	●			
	M-F: PEAK PERIODS	-979	59.2	25	0.8%	●	●	●	●	
	M-F: BASE	-453	61.3	25	-2.0%	●	●			
	SAT	-881	52.8	20	13.6%	●	●			
	SUN	-87	46.3	15	5.6%	●	●			
104 (4C) New Route	ANNUAL AVERAGE		53.0					●	●	
	M-F	1297	56.3	20		●				
	SAT	625	32.4	15		●				
6 Schedule	ANNUAL AVERAGE		48.0							Ridership loss on weekdays was by design and more than replaced by Route 106 ridership. Peak period schedule adherence addressed in 2018 Service Plan.
	M-F	-1298	56.3	25	-3.2%	●	●			
	M-F: PEAK PERIODS	-808	52.1	25	4.4%	●	●	●	●	
	M-F: BASE	-332	65.8	25	-6.9%	●	●			
	SAT	163	49.6	20	1.6%	●	●			
	SAT: 6-8AM	36	13.3		10.2%	●	●			
106/ 102 (6A/2C) Schedule	ANNUAL AVERAGE		77.0					●	●	
	M-F	1152	82.8	20	-6.6%	●	●			
	M-F: 6-8AM	44	22.0	20		●				
22 (7) Eliminate	ANNUAL AVERAGE							●	●	
	M-F	-1094								
8 Eliminate	ANNUAL AVERAGE							●	●	
	M-F	-207								
9 Schedule	ANNUAL AVERAGE		37.0					●	●	
	M-F: 6AM-2PM	63	36.5	20	-2.2%	●	●			

Route & Description of Change	Service Period	Ridership			Schedule Adherence	Assessment of Changes				Status
		Change in Boardings	Productivity (B/ RY/H)	Productivity Standard	Change in % Late	Ridership	Adherence	Public Feedback	Overall Assessment	
10 Schedule	ANNUAL AVERAGE	0	54.0							Ridership and productivity are performing well. Saturday ridership reduced slightly, but is more productive.
	M-F	267	57.4	50	-4.6%	●	●			
	M-F: PEAK PERIODS	86	56.5	50	-10.9%	●	●	●	●	
	SAT	-137	53.5	30	-1.7%	●	●			
	SUN	1287	58.5	20	-20.6%	●	●			
10A Eliminate	Included in Route 10							●	●	
11 Interline & Schedule	ANNUAL AVERAGE		30.0					●	●	
	SUN	158	19.9	15	-3.6%	●	●			
14 Schedule	ANNUAL AVERAGE		40.0							
	M-F	160	40.5	25	-3.7%	●	●			
	M-F: PEAK PERIODS	100	45.5	25	-10.3%	●	●	●	●	
	SAT	149	39.4	20	-3.2%	●	●			
16 Schedule	ANNUAL AVERAGE		47.0					●	●	
	SAT: 5-9PM	212	50.9	30	-1.3%	●	●			
17 Schedule & Routing	ANNUAL AVERAGE		55.0							Route 17 is performing well in ridership and schedule adherence. Saturday morning ridership is poor, but all-day Saturday ridership is good.
	M-F	371	58.3	50	-3.1%	●	●			
	M-F: BASE	151	56.1	50	-4.3%	●	●	●	●	
	SAT	92	51.9	30	-7.4%	●	●			
	SAT: 6-9AM	-44	18.7		-0.9%	●	●			
20 Schedule	ANNUAL AVERAGE		53.0							
	M-F: PEAK PERIODS	556	56.4	25	-2.0%	●	●	●	●	
	M-F: BASE	378	66.9	25	0.6%	●	●			
	SAT: 9AM-5PM	550	51.4	20	-23.8%	●	●			
7 (22) Routing	ANNUAL AVERAGE		34.0							Ridership along Dundas where Route 7 was removed made up approximately 40% of Route 7 ridership. Ridership only decreased 15%.
	M-F	-243	36.4	25	-4.5%	●	●			
	SAT	-286	26.9	20	-5.9%	●	●			
	SUN	-349	30.1	15	-5.1%	●	●			
26 Routing	ANNUAL AVERAGE		45.0							
	M-F	196	46.9	25	-0.9%	●	●	●	●	
	SAT	184	36.2	20	1.9%	●	●			
	SUN	0	29.4	15	-0.5%	●	●			
27 Schedule	ANNUAL AVERAGE		83.0					●	●	
	M-F: 7AM-6PM	756	86.5	20	-2.4%	●	●			
30 Schedule	ANNUAL AVERAGE		26.0							
	M-F: PEAK PERIODS	8	28.7	15	-10.0%	●	●	●	●	
	M-F: BASE	19	16.3	15	-9.7%	●	●			
33 Schedule	ANNUAL AVERAGE		40.0					●	●	
	M-F: 1-6PM	123	43.9	20	0.0%	●	●			
35 Routing & Schedule	ANNUAL AVERAGE		28.0							
	M-F	65	31.6	20	-2.3%	●	●			
	M-F: 7-9PM	41	20.5	15	-5.6%	●	●	●	●	
	SAT	135	21.2	15	1.3%	●	●			
	SAT: 6-9PM	57	19.0	15		●	●			
90 Schedule	ANNUAL AVERAGE		43.0					●	●	
	M-F: PEAK PERIODS	287	40.6	30	1.9%	●	●			
92 Schedule	ANNUAL AVERAGE		28.0					●	●	Base ridership does not meet productivity standard; ridership may still grow
	M-F: BASE	289	28.9	30		●	●			

**Legend**

Ridership	● - Productivity of service change had positive (expected) results	● - Productivity of service change had mixed results	● - Productivity of service change had negative (unexpected) results
Adherence	● - Improved	● - Similar	● - Diminished
Public Feedback	● - Positive	● - Mixed	● - Negative
Assessment	● - Positive	● - Monitoring	● - Under Review

**5 Year Route Structure Review  
Revised Implementation Plan**

Route	Initial Recommendation	Revised Recommendation	Service Hour Impact	New Peak Buses	Initial Recommended Implementation year	Revised Recommended Implementation Year	Actual Implementation
<b>2015 Route Structure Review Recommended Changes</b>							
6A Richmond	Weekday- Reduce Headway from 15 min to 10 min from 1:30 pm to 7:00 pm (5.5 hours)- Fall/Winter Signup only		465	1	2015		September 2015
9 Whitehills	Sunday- Operate Route 9A/B between 9:00 am and 7:00 pm (10 hours, 30 min combined headway- 60 min each). Replaces 9C and requires service hour increase on route 6 to ensure clock face scheduling		610		2015		September 2015
10 Wonderland	Sunday- Reduce headway from 60 min to 30 min from 9:00 am to 7:00 pm (10 hours)		900		2015	2016	2016
18 Western Rd	Route Modification- Split from existing route 2A/B to create own route				2015		September 2015
19 Oakridge	Sunday- Introduce service from 9:00 am to 7:00 pm (10 hours; 60 min headway)		600		2015		September 2015
24 Baseline	Route Modification- Extend route to Colonel Talbot to the west and eliminate service east of Victoria Hospital. Weekday- Reduce headway from 35 min to 30 min during weekday PM peak period				2015		November 2015
29 Capulet Lane	Route Adjustment- Separate route 10 Wonderland schedule and create own route				2015		September 2015
31 Orchard Park	Sunday- Introduce service from 9:00 am to 7:00 pm (10 hours; 60 min headway)		600		2015		September 2015
32 Windermere	Sunday- Introduce service from 9:00 am to 7:00 pm (10 hours; 60 min headway)		600		2015		September 2015
34 Medway	Weekday- Introduce service from 9:00 am to 2:00 pm (5 hours, 40 min headway)		1,265		2015		September 2015
36 Airport Industrial	Weekday- Introduce weekday base service from 9:00 am to 2:30 pm (5.5 hours, 30 min headway)		1,278		2015		September 2015
38 Stoney Creek/ 39 Fanshawe West	Weekday- Increase service by 1 trip from 9:00 pm to 10:00 pm (1 hour, 30 min headway)		253		2015		September 2015
91 Express	Weekday- New peak period service from 7:00 am to 11:00 am and 2:00 pm to 7:00 pm during Spring/Summer signup (9 hours, 20 min headway). Weekday- New base service from 11:00 am to 2:00 pm (3 hours, 30 min headway).		4		2015		September 2015
92 Express	New Route- Peak period Express Route on Adelaide between Masonville Mall and Victoria Hospital from 7:00 am to 10:00 am and 3:00 pm to 6:00 pm (6 hours, 20 min headway)		7,084	4	2015		September 2015

5 Year Route Structure Review Revised Implementation Plan							
Route	Initial Recommendation	Revised Recommendation	Service Hour Impact	New Peak Buses	Initial Recommended Implementation year	Revised Recommended Implementation Year	Actual Implementation
<b>2016 Route Structure Review Recommended Changes</b>							
1	Route Modification- Eliminate Route 1 Kipps/Thompson south of Downtown.	Maintain existing route alignment			2016	Not Recommended for implementation	Not Implemented
1	Weekday- Base period frequency improvements 20 min to 15 min between 9:00 am and 2:00 pm	Not recommended in final			2016	Not recommended for implementation	Not Implemented
2	Route Modification- Split route at Hale St (Route 2A Modification). No change to Route 2B	Same recommendation as in the Route Structure and Service Guidelines Document			2016		2016
2	Weekday- frequency improvement from 30 min to 20 min between 7:00 am and 9:00 am and 2:00 pm and 6:00 pm (6 hours- Summer period only)	Same recommendation as in the Route Structure and Service Guidelines Document	528		2016		2016
2	Sunday- Eliminate service to Masonville Mall on Sunday	Same recommendation as in the Route Structure and Service Guidelines Document	(558)		2016		2016
3	Route Modification- Branch route so one branch terminates at Argyle Mall on weekdays between 6:00 am and 6:00 pm and both branches terminate at Argyle Mall at all other periods.	Same recommendation as in the Route Structure and Service Guidelines Document	6,371	1	2016		2016
3	Saturday- reduce frequency from 60 min to 30 min from 6:00 am to 8:00 am (2 hours)	Same recommendation as in the Route Structure and Service Guidelines Document	504		2016		2016
4	Route Modification- Split route at Baseline Road to service Chelsea Green.	Maintain existing route alignment			2016	Not recommended for implementation	Not Implemented
4	Saturday- Improve frequency from 30 min to 20 min between 5:00 pm and 9:00 pm (4 hours).	Not recommended in final			2016	Not recommended for implementation	Not Implemented
4	Sunday- Improve frequency from 30 min to 20 min between 9:00 am and 7:00 pm (12 hours).	Not recommended in final			2016	Not recommended for implementation	Not Implemented
6	Route Modification- Implement two-way loop south of downtown	Maintain existing route alignment			2016	Not recommended for implementation	Not Implemented
6	Weekday- Improve frequency from 20 min to 15 min between 7:00 am and 9:00 am (Fall/Winter only, 2 hours)	Not recommended in final			2016	Not recommended for implementation	Not Implemented
6	Saturday- New service from 6:00 am to 8:00 am (2 hours, 30 min headway- 60 min per branch).	Not recommended in final			2016	Not recommended for implementation	Not Implemented
7	Route Modification- Realign route west of Highbury to operate along Florence/York instead of along Dundas	Same recommendation as in the Route Structure and Service Guidelines Document			2016		2016
8	Route Modification- Eliminate route	Same recommendation as in the Route Structure and Service Guidelines Document	(3,200)	(2)	2016		2016
10	Weekday- Peak frequency improvement from 30 min to 20 min between 7:00 am and 9:00 am and 2:00 pm and 6:00 pm (6 hours)	Same recommendation as in the Route Structure and Service Guidelines Document	3,036	3	2015		2016
10	Saturday- Frequency improvement from 60 min to 30 min between 6:00 am and 8:00 am (2 hours)	Same recommendation as in the Route Structure and Service Guidelines Document	312		2016		2016
10	Sunday- Frequency improvements from 60 min to 30 min between 9:00 am and 7:00 pm (10 hours)	Same recommendation as in the Route Structure and Service Guidelines Document	930		2016		2016

5 Year Route Structure Review Revised Implementation Plan							
Route	Initial Recommendation	Revised Recommendation	Service Hour Impact	New Peak Buses	Initial Recommended Implementation year	Revised Recommended Implementation Year	Actual Implementation
10	Sunday- Extend Service to Masonville Mall between 9:00 am and 6:00 pm (9 hours)	Same recommendation as in the Route Structure and Service Guidelines Document	558		2016		2016
10A	Route Modification- Eliminate route from service	Same recommendation as in the Route Structure and Service Guidelines Document	(1,716)	(1)	2016		2016
11	Route Modification- Route no longer interlined with route 7 Wavell- Service hour adjustments	Route 7 is maintained and interline will continue			2016	Not recommended for implementation	Not Implemented
11	Sunday- Frequency improvement from 60 min to 30 min between 9:00 am and 7:00 pm (10 hours).	Same recommendation as in the Route Structure and Service Guidelines Document	620		2016		2016
14	Route Modification- Terminate route at Fanshawe College Terminal.	Maintain existing route alignment			2016	Not recommended for implementation	Not Implemented
14	Weekday- Peak frequency improvement from 30 min to 20 min between 7:00 am and 9:00 am and 2:00 pm and 6:00 pm (6 hours)	Same recommendation as in the Route Structure and Service Guidelines Document	1,512	1	2018	2016	2016
14	Saturday- Frequency improvement from 60 min to 30 min between 6:00 am and 8:00 am (2 hours).	Same recommendation as in the Route Structure and Service Guidelines Document	104		2016		2016
14	Sunday- Frequency improvement from 60 min to 30 min between 9:00 am and 7:00 pm (10 hours)	Same recommendation as in the Route Structure and Service Guidelines Document	620		2016		2016
16	Saturday- Improve frequency from 30 min to 20 min between 5:00 pm and 9:00 pm (4 hours)	Same recommendation as in the Route Structure and Service Guidelines Document	416		2016		2016
17	Route Modification- Split route at Hyde Park to service Byron and Riverbend during the weekday peak and base periods.	Same recommendation as in the Route Structure and Service Guidelines Document			2016		2016
17	Route Modification- Terminate route at Fanshawe College to the east.	Route Modification - Terminate route at Argyle Mall to the east.	(504)	1	2016		2016
17	Weekday- Base period frequency improvement from 25 min to 20 min (5 hours)	Same recommendation as in the Route Structure and Service Guidelines Document	1,260		2016		2016
17	Saturday- Frequency improvements from 60 min to 45 min between 8:00 am and 10:00 am (2 hours)	Same recommendation as in the Route Structure and Service Guidelines Document	156		2016		2016
17	Sunday- Frequency improvement from 60 min to 30 min between 9:00 am and 7:00 pm (10 hours)	Same recommendation as in the Route Structure and Service Guidelines Document	1,240		2016		2016
17	Sunday- Frequency improvement from 60 min to 45 min between 7:00 pm and 11:00 pm (4 hours)	Sunday- Frequency improvement from 60 min to 40 min between 7:00 pm and 11:00 pm (4 hours)	310		2016		2016
18	No recommendation in draft	Eliminate Route 18	(6,939)	(4)			2016
20	Weekday- Improve frequency from 20 min to 15 min between 7:00 am and 9:00 am and 2:00 pm and 6:00 pm (6 hours).	Same recommendation as in the Route Structure and Service Guidelines Document	3,024	2	2016		2016
20	Weekday- Frequency improvement 30 min to 20 min between 9:00 am and 2:00 pm (5 hours)	Same recommendation as in the Route Structure and Service Guidelines Document	2,520		2016		2016

**5 Year Route Structure Review  
Revised Implementation Plan**

Route	Initial Recommendation	Revised Recommendation	Service Hour Impact	New Peak Buses	Initial Recommended Implementation year	Revised Recommended Implementation Year	Actual Implementation
20	Weekday- Improve frequency from 30 min to 20 min between 6:00 pm and 9:00 pm (3 hours).	Not Recommended for Implementation			2016	Not recommended for implementation	Not Implemented
20	Saturday- Frequency improvement from 30 min to 20 min between 9:00 am and 5:00 pm (8 hours).	Same recommendation as in the Route Structure and Service Guidelines Document	832		2016		2016
22	Route Modification- Eliminate route	Same recommendation as in the Route Structure and Service Guidelines Document			2016		2016
26	Route Modification- Remove service from Homeview Road and extend further east along Ferndale to Dundalk	Same recommendation as in the Route Structure and Service Guidelines Document			2017		2016
27	Weekday- Improve frequency from 20 min to 15 min between 7:30 am and 6:00 pm (10.5 hours- fall/winter signup only).	Same recommendation as in the Route Structure and Service Guidelines Document	1,722	1	2016		2016
30	Weekday- Increase service by 2 additional trips in the AM peak and 2 additional trips in the PM peak (2 hours).	Same recommendation as in the Route Structure and Service Guidelines Document	506		2016		2016
32	Route Modification- Extend route to Argyle Mall (120 min run time).	Maintain existing route alignment			2016	Not recommended for implementation	Not Implemented
32	Weekday- Frequency improvement from 6:00 pm to 11:00 pm (5 hours, 60 to 30 min frequency).	Not Recommended for Implementation			2016	Not recommended for implementation	Not Implemented
32	Weekday- Introduce service from 11:00 pm to 12:00 am (1 hour, 60 min frequency)	Not Recommended for Implementation			2016	Not recommended for implementation	Not Implemented
32	Saturday- Introduce service from 6:00 am to 8:00 am and 9:00 pm to 12:00 pm (5 hours, 60 min headway).	Not Recommended for Implementation			2016	Not recommended for implementation	Not Implemented
32	Sunday- Introduce service from 7:00 pm to 11:00 pm (4 hours, 60 min frequency)	Not Recommended for Implementation			2016	Not recommended for implementation	Not Implemented
34	Route modification- Realign route to McGarrell Dr; frequency reduction 30 to 40 min	Maintain existing route alignment			2016	Not recommended for implementation	Not Implemented
35	Route modification- realign route to provide Route 2A passengers with service to Argyle Mall.	Route modification - realign route to provide Route 2A passengers with service to Argyle Mall and to maintain service to Bonaventure			2016		2016
35	Weekday- Introduce service from 7:00 pm to 9:00 pm (2 hours, 30 min headway).	Same recommendation as in the Route Structure and Service Guidelines Document	504		2016		2016
35	Saturday- Introduce service from 6:30 pm to 9:00 pm (2.5 hours, 30 min headway)	Same recommendation as in the Route Structure and Service Guidelines Document	130		2016		2016
35	Sunday- New service from 9:00 am to 7:00 pm (10 hours, 30 min headway).	Same recommendation as in the Route Structure and Service Guidelines Document	620		2016		2016
90	Weekday- Frequency improvement from 20 min to 15 min between 7 am and 11 am and 2 pm and 6:30 pm (8.5 hours)	Same recommendation as in the Route Structure and Service Guidelines Document	2,142	1	2016		2016
92	Weekday- new base service from 10:00 am to 3:00 pm (5 hours, 30 min headway).	Same recommendation as in the Route Structure and Service Guidelines Document	3,780		2016		2016
92	Weekday- extend PM peak service by 1 hour from 6:00 pm to 7:00 pm (20 min headway)	Not Recommended for Implementation			2016	Not recommended for implementation	Not Implemented

**5 Year Route Structure Review  
Revised Implementation Plan**

Route	Initial Recommendation	Revised Recommendation	Service Hour Impact	New Peak Buses	Initial Recommended Implementation year	Revised Recommended Implementation Year	Actual Implementation
<b>2016 Draft Changes per Annual Service Planning Process</b>							
1	Increase round trip time weekdays between 6:00 am and 2:00 pm, and 6:00 pm and 9:00 pm (11 hours); Saturdays between 8:00 am and 10:00 am, and 6:00 pm and 9:00 pm (5 hours); Sundays between 9:00 am and 7:00 pm (10 hours)		3,526		2016		2016
1	Weekday - reduce frequency from 15 min to 20 min between 6:00 am and 7:00 am (1 hour)		(504)		2016		2016
4	All-Year - reduce frequency Weekdays from 15 min to 30 min between 6:00 am and 7:00 am (1 hour), and Weekdays from 15 min to 20 min between 9:30 am and 2:00 pm (4.5 hours); Fall/ Winter/ Spring Only - reduce frequency Weekdays from 10 min to 15 min between 7:00 am and 9:30 am, and 2:30 pm and 6:00 pm (6 hours), and Saturdays from 15 to 30 min between 8:00 am and 6:00 pm (10 hours)		(8,472)		2016		2016
4	reduce frequency from 15 minutes to 30 minutes Weekdays between 6 am and 7 am and Saturdays between 8 am and 6 pm; from 15 minutes to 20 minutes weekdays between 9:30 am and 2 pm		(4,800)		2016		2016
4	Reduce frequency from 10 minutes to 15 minutes weekdays between 7 am and 9:30 am and between 2:30 pm and 6 pm (Fall/winter/spring only)		(3,672)		2016		2016
4	increase round trip time from 90 minutes to 105 minutes weekdays between 7 am and 9:30 am (Summer only)		120		2016		2016
104	Fall/ Winter/ Spring Only - Introduce new route operating at a 30 min frequency on Weekdays between 6:00 am and 6:00 pm (12 hours) and on Saturdays between 8:00am and 6:00pm (10 hours) connecting Fanshawe College with Downtown		4,172	2	2016		2016
6	Weekday - All Year - Reduce frequency from 20 min to 30 min between 8:00 am and 2:00 pm (6 hours); Fall/Winter Only - reduce frequency from 15 min to 30 min between 2:00 pm and 7:00 pm; Spring/Summer Only - Reduce frequency from 20 min to 30 min between 2:00 pm and 7:00 pm		(4,926)	(3)	2016		2016
106/102	(Fall/ Winter Only) Weekday - Introduce service at a 40 minute frequency between 6:00 am and 8:00 am (2 hours)		310		2016		2016
102/106	(Fall/Winter Only) Weekdays - Introduce clockwise Routes 102/106 operating on a 10 min frequency between 8:00 am and 11:00 am (3 hours), on a 12 min frequency between 2:30 pm and 6:30 pm (4 hours), on a 15 min frequency between 11:00 am and 2:30 pm (3.5 hours), and on a 40 min frequency between 6:30 pm and 10:00 pm (3.5 hours)		6,324	4	2016		2016
9	Weekday - Increase round trip time from 60 min to 75 min between 6:00 am and 2:00 pm		2,016		2016		2016
18	Eliminate Route 18		(6,939)	(4)	2016		2016
30	Weekday - Reduce frequency from 30 min to 40 min				2016		2016



5 Year Route Structure Review Revised Implementation Plan							
Route	Initial Recommendation	Revised Recommendation	Service Hour Impact	New Peak Buses	Initial Recommended Implementation year	Revised Recommended Implementation Year	Actual Implementation
33	(Fall/Winter Only) Weekday - Increase frequency from 20 to 15 minutes between 1:00 pm and 6:00 pm		784	1	2016		2016
<b>2017 Route Structure Review Recommended Changes</b>							
4	Route Modification- Modify route south of Southdale	Maintain existing alignment			2017		Existing alignment maintained
40	Route Modification- Split Route 13 Grenfell from 13 Wellington road and create a separate route. Extend to Stackhouse Ave as area develops. Weekday- operate a 30 min headway from 6:00 am to 12:00 am (18 hours) Saturday- Operate at 30 min headway from 6:00 am to 12:00 pm (18 hours) Sunday- operate a 30 min headway from 9:00 am to 11:00 pm (14 hours)	Route Modification- Split Route 13 Northridge from 13 Wellington road to create a separate route operating between the Northridge neighbourhood and Masonville Mall Weekday- Operate a 30 min headway from 6:00 am to 6:30 pm (12.5 hours) Weekday- interline with Route 34 between 6:30 pm and 12 am (5.5 hours) on a 60 minute headway Saturday- Operate at a 30 minute headway from 6:00 am to 6:00 pm (12 hours) Saturday- interline with Route 34 between 6:00 pm and 12:00 am (6 hours) on a 60 minute Sunday- Interline with Route 34 between 9:00 am and 11:00 pm (10 hours) on a 60 minute headway	3,800	1	2017		2017
13	Route Modification- Terminate route at Masonville Mall to the north. Create a second split tail to the south west of f Wellington road (13B) Weekday- reduce headway from 30 min to 20 min from 6 pm to 9 pm (3 hours) Saturday- Reduce headway from 30 min to 20 min from 5 pm to 9 pm (4 hours)	Terminate Route a Masonville Mall Do not add the 13B Branch in the south end	(4,215)	(2)	2017		2017
25	Route Modification- extend route to travel to Masonville Mall via Glenora and Fanshawe Weekday- Introduce service from 6 am to 7 am and 9 pm to 12 pm (4 hours, 60 min headway). Saturday- Introduce service from 6 am to 10 am and 7 pm to 12 am (11 hours, 60 min headway) and from 10 am to 7 pm (9 hours, 30 min headway) Sunday- Introduce service from 9 am to 11 pm (15 hours, 60 min headway)	Route Modification- extend route to travel to Masonville Mall via the Grenfell Neighbourhood Maintain the service hour increases as laid out in the initial recommendation	7,690	1	2017		2017
26	Route Modification- realign route east of Wharncliffe Road.	Maintain existing alignment			2017		Existing alignment maintained

5 Year Route Structure Review Revised Implementation Plan							
Route	Initial Recommendation	Revised Recommendation	Service Hour Impact	New Peak Buses	Initial Recommended Implementation year	Revised Recommended Implementation Year	Actual Implementation
90	Weekday- Reduce headway from 15 min to 10 min from 7 am to 11 am and 2 pm to 7:30 pm (9.5 hours)/ Weekday- reduce headway from 30 min to 20 min from 11 am to 2 pm (3 hours)	Weekday- reduce headway from 30 minutes to 20 minutes from 11:00 am to 2:00 pm (3 hours) Saturday- Introduce service between 8:00 am and 6:00 pm (10 hours) on a 30 minute frequency Sunday- Introduce service between 10:00 am and 6:00 pm (8 hours) on a 30 minute frequency	4,056	3	2017		2017
91	Weekday- Reduce headway from 20 min to 15 min from 7 am to 11 am and 2 pm to 7:30 pm (9.5 hours)		2,205	1	2017		2017
<b>2017 Draft Changes per Annual Service Planning Process</b>							
2B	Route Modification- No longer serve the Bonventure neighbourhood and extend route to serve Trafalgar Heights	Maintain existing alignment			2017		Existing alignment maintained
2A	Route Modification- No longer serve the Trafalgar Heights neighbourhood and extend route to operate along Clarke Road to Argyle Mall	Route Modification- Serve Argyle Mall in the eastbound direction only and Trafalgar heights in the westbound direction only			2017		2017
2	Improve Sunday Frequency from 30 minutes to 15 minutes (11 am to 7 pm) 8 hours		1,488		2017		2017
3	Route Modification- Extend the route to operate to the Bonaventure neighbourhood	Maintain existing alignment on Route 3B; Extend Route 3A to serve Argyle Mall during all time periods	630		2017		2017
12/28	Operate route 28 Peak periods only (6:00 am - 10:30 am and 3:00 pm to 7:00 pm) 8.5 hours Remove route 12 interline to Lambeth (8.5 hours) Modify the route to operate along Sunray Ave instead of Outer Drive		(882)		2017		2017
26	Extend weekday and Saturday service to midnight (2 hours) Add a weekday PM peak period vehicle to improve frequency to 30 minutes		1,216 1,008	1	2017 2017		2017 2017
27	Add a vehicle in the spring/summer to alleviate capacity issues weekdays between 7:00 am- 6:00 pm (10.5 hours)		935		2017		2017
33	Add a vehicle in the spring/summer to alleviate capacity issues weekdays between 8:00 am and 10:00 am and 1:00 pm and 6:00 pm) 7 hours		623		2017		2017
34	Interline route 34 with Route 40 after 6:30 pm on Weekdays, after 6 pm Saturday and all day Sunday on a 60 minute frequency Introduce Saturday service between 6 am and 6 pm on a 30 minute frequency		2,912				2017
38	Route Modification- realign route to eliminate the unprotected crossing of Adelaide at Blackwater				2017		2017
92	Start the AM Peak period service later to utilize the resources to start the PM Peak frequency earlier				2017		2017

5 Year Route Structure Review Revised Implementation Plan							
Route	Initial Recommendation	Revised Recommendation	Service Hour Impact	New Peak Buses	Initial Recommended Implementation year	Revised Recommended Implementation Year	Actual Implementation
<b>2018 Route Structure Review Recommended Changes</b>							
18	Weekday- Reduce headway from 6 min to 5 min from 8 am to 9:00 am and from 2:00 pm to 6:00 pm (6 hours)	Route 18 was eliminated as part of the 2016 service plan	780	1	2018	N/A	Will not be implemented
9	Weekday- Operate route 9 at a 30 min headway between 7:00 pm and 11:00 pm (4 hours, 60 min headway for 9A and 9B- combined 30 min), Replaces route 9C and required serve hour increase on route 6 Richmond to ensure clockface scheduling.	Deferred for review as part of the 2019 service plan	956		2018	2019	
	Saturday- Operate Route 9 at a 30 min headway between 7:00 pm and 11:00 pm (4 hours, 60 min headway for 9A and 9B- Combined 30 min). Replaces 9C and requires service hour increase on route 6 Richmond to ensure clockface scheduling	Deferred for review as part of the 2019 service plan	191		2018	2019	
12	Sunday- Reduce headway from 60 min to 30 min from 9:00 am to 7:00 pm (10 hours)		630		2018	2018	
14	Weekday- Reduce headway from 30 min to 20 min from 7:00 am to 9:00 am and 2:00 pm to 6:00 pm (6 hours)		1,645	1	2018	2016	2016
15	Weekday- Reduce headway from 30 min to 20 min from 5:00 pm to 9:00 pm (4 hours).		759		2018	2018	
17	Weekday- Reduce headway from 30 min to 20 min from 6 pm to 9 pm (3 hours)		1,512		2018	2018	
	Saturday- Reduce headway from 30 min to 20 min from 8 am to 9 pm (13 hours).	Deferred for review as part of the 2019 service plan	504		2018	2019	
21	Weekday- Reduce headway from 30 min to 20 min from 5 pm to 9 pm (4 hours).		759		2018	2018	
25	Weekday- Reduce headway from 60 min to 30 min from 5 pm to 9 pm	Deferred for review as part of the 2019 service plan	759		2018	2019	
	Saturday- Reduce headway from 60 min to 30 min from 6 pm to 9 pm (3 hours).	Deferred for review as part of the 2019 service plan	208		2018	2019	
	Sunday- Reduce headway from 60 min to 30 min from 9 am to 7 pm	Deferred for review as part of the 2019 service plan	600		2018	2019	
26	Sunday- Extend service from 6:30 pm to 11:30 pm (5 hours, 60 min headway).		310		2018	2015	2015
	Sunday- Reduce headway from 60 min to 30 min form 8:30 am to 6:30 pm (10 hours).		620		2018	2017	2017
	Weekday- Extend service from 10 pm to 11 pm (60 min headway, 1 hour).	Weekday & Saturday- Extend service from 10 pm to 12 am	1,216		2018	2017	2017
31	Weekday- Reduce headway from 60 min to 30 min 6 pm to 11 pm; Introduce service from 11 pm to 12 am (60 min headway, 1 hour).	Deferred for review as part of the 2019 service plan	1,518		2018	2019	
	Saturday- Reduce headway from 60 min to 30 min from 6 pm to 9 pm (3 hours).	Deferred for review as part of the 2019 service plan	312		2018	2019	

**5 Year Route Structure Review  
Revised Implementation Plan**

Route	Initial Recommendation	Revised Recommendation	Service Hour Impact	New Peak Buses	Initial Recommended Implementation year	Revised Recommended Implementation Year	Actual Implementation
91	Weekday- Reduce headway from 15 min to 10 min from 7 am to 11 am and 2 pm to 7:30 pm Weekday- recude headway from 30 min to 20 min from 11 am to 2 pm	Based on feedback from the public and the success of recently implemented weekend service on Route 90 it is recommended that current freuqency be maintained on Route 91 during the weekday and weekend service be implemented instead (see below for costing)	5,608		2018	2019	
<b>2018 Draft Changes per Annual Service Planning Process</b>							
2	Weekday- Increase round trip time from 105 minutes to 120 minutes between 10 am and 12 pm		508		2018		
	Weekday- Increase frequency from 30 minutes to 20 minutes between 9 pm and 12 am		1512		2018		
	Saturday- Increase round trip time from 105 minutes to 120 minutes between 12 pm and 6 pm		312		2018		
	Saturday- Increase round trip time from 90 minutes to 105 minutes between 6 pm and 9 pm		156		2018		
3	Sunday- Remove routing from Dufferin Ave.				2018		
3/5	Interline Routes 3 and 5				2018		
4	Weekday- Increase Round trip time from 105 minutes to 120 minutes during PM peak periods (4 pm to 6 pm)		504	1	2018		
	Saturday- Incaze frequency from 30 minutes to 25 minutes during the PM Peak and early evening periods		468		2018		
5	Route Modification- modify route to alternate between an A & B routing on Springbank between Wonderland and Gardenwood. A Routing would maintiain existing alginment and B routing would operate along the evening and weekend alignment				2018		
6	Weekday- Increase frequency from 30 minutes to 25 minutes during the PM Peak Period (2 pm to 6 pm)		1,008	1	2018		
	Saturday- Increase round trip time from 80- minutes to 100 minutes during the PM Peak period (12 pm to 6 pm)		312		2018		
7	Route Modification- realign the route to service Aryle Mall before and after serving Wavell between Clarke Road and Dundas				2018		
10	Route Modification- remove evening and Sunday loop along Berkshire and Teeple Terrace				2018		
11	Route Modification- Modify route to topping Lane Berkshire and Robind Road between Commissioners and Baseline. Remove service along Cranbrook Rd and Commissioners west of Wonderland				2018		
7/11	Weekday- increase frequency from 30 minutes to 20 minutes between 9 am and 9 am and 2 pm and 6 pm		3,024	2	2018		
12	Weekday- increase round trip time from 60 minutes to 80 minutes between 4 pm and 6 pm		504	1	2018		

**5 Year Route Structure Review  
Revised Implementation Plan**

Route	Initial Recommendation	Revised Recommendation	Service Hour Impact	New Peak Buses	Initial Recommended Implementation year	Revised Recommended Implementation Year	Actual Implementation
15	Route Modification- Operate the Farhnam Dalhousie loop during all time periods. Extend the route to operate along Cranbrok and Commissioners west of Wonderland		2,328	1	2018		
	Route Modification- Modify route to serve Viscount, Cranbrook and Commissioners (currently served by Route 11) on alternating Route 15 trips.				2018		
16	Weekday- increase round trip time from 100 minutes to 120 minutes between 1 pm and 2 pm		252		2018		
	Saturday- Increase frequency from 30 minutes to 25 minutes between 8 am and 10 am		104		2018		
17	Weekday- Increase round trip time from 120 minutes to 140 minutes between 2 pm and 4 pm		504				
17B	Route Modification- realign route to serve Westdel Bourne in Riverbend		1,008		2018		
20	Route Modification- Operate the Oakcrossing loop during the weekday evening periods (6 pm - 10 pm)		2,016				
	Route Modification- Operate the Oakcrossing loop during the Saturday daytime periods (6 am to 6 pm)		1,040				
	Route Modification- Operate the Oakcrossing lopp during the Sunday daytime periods (9 am to 6 pm)		558				
23	Eliminate Route		(7,659)	(2)	2018		
24	Route Modification- realign route to operate along Commissioners and Wonderland				2018		
	Weekday- decrease frequency from 30 minutes to 35 minutes between 3 pm and 6 pm				2018		
27	Saturday- Introduce service between 11 am and 9 pm		520		2018		
29	Weekday- increase frequency from 15 minutes to 13 minutes between 4 pm and 6 pm. Fall/Winter only		308	1	2018		
	Weekday- increase frequency from 15 minutes to 12 minutes between 7 am and 12 pm. Fall/Winter only				2018		
	Extend Monday- Thursday schedule to Friday		185		2018		
	Weekday- increase frequency from 20 minutes to 13 minutes between 8 pm and 10 pm. Fall/Winter only		308		2018		
	Saturday- Introduce service on a 35 minute frequency between 12 pm and 9 pm (fall/winter only)		243		2018		
	Sunday- Introduce service on a 35 minute frequency between 1 pm and 9 pm (fall/winter only)		264		2018		
33	Weekday- Increase frequency from 15 minutes to 13 minutes during the PM Peak periods (1 pm to 6 pm). Fall/Winter only						
	Weekday- decrease frquency from 15 minutes to 17 minutes between 7 am and 2 pm Fall/Winter only				2018		
	Weekday- increase frequency from 30 minutes to 17 minutesw bwtween 6 pm and 9 pm Fall/Winter only		462		2018		
	Extend Monday- Thursday schedule to Friday Fall/Winter only		77		2018		

**5 Year Route Structure Review  
Revised Implementation Plan**

Route	Initial Recommendation	Revised Recommendation	Service Hour Impact	New Peak Buses	Initial Recommended Implementation year	Revised Recommended Implementation Year	Actual Implementation
90	Weekday- increase round trip time from 75 minutes to 90 minutes between 4 pm and 6 pm		504	1	2018		
	Weekday- Increase frequency from 20 minutes to 15 minutes between 11 am and 2 pm		756		2018		
	Weekday- Introduce 35 minute frequency between 6:30 pm and 9 pm		1,260		2018		
	Saturday- Increase frequency from 30 minutes to 25 minutes between 10 am and 6 pm		416		2018		
	Sunday- Increase from from 30 minutes to 20 minutes between 11 am and 6 pm		434		2018		
	Sunday- Introduce 30 minute frequency between 6 pm and 7 pm		62		2018		
91	Saturday- Introduce service on a 25 minutes frequency between 11 am and 9 pm		1,040		2018		
	Sunday- Introduce service on a 25 minute frequency between 12 pm and 8 pm		992		2018		
102	Weekday- Increase frequency from 15 minutes to 12 minutes between 11 am and 2 pm- Fall/Winter only		462		2018		
	Weekday- Increase round trip time from 48 minutes to 60 minutes between 4 pm and 6 pm- Fall/Winter only		308	1	2018		
	Weekday- Increase frequency from 45 minutes to 22 minutes between 6 pm and 9 pm- Fall/Winter only		462		2018		
	Weekday- Introduce service on a 40 minute frequency between 9 pm and 11:30 pm		385				
	Saturday- Introduce service on a 40 minute frequency between 11 am and 11 pm		324		2018		
	Sunday- Introduce service on a 40 minute frequency between 11 am to 10 pm		363		2018		
106	Weekday- Increase round trip time from 40 minutes to 50 minutes between 4 pm and 6 pm- Fall/Winter only		308	1	2018		
	Weekday- Increase frequency from 40 minutes to 20 minutes between 6 pm and 9 pm- Fall/Winter only		462		2018		
	Weekday- Introduce service on a 35 minute frequency between 9 pm and 11:30 pm. Fall/Winter only		385		2018		
	Saturday- Introduce service on a 35 minute frequency between 11 am and 11 pm. Fal/Winter only		324		2018		
	Sunday- Introduce service on a 35 minute frequency between 11 am and 10 pm. Fall/Winter only		363		2018		
102/106	Weekday- Extend Monday-Thurday schedule to Friday. Fall/Winter only		370		2018		

**5 Year Route Structure Review  
Revised Implementation Plan**

Route	Initial Recommendation	Revised Recommendation	Service Hour Impact	New Peak Buses	Initial Recommended Implementation year	Revised Recommended Implementation Year	Actual Implementation
<b>2019 Route Structure Review Recommended Changes</b>							
17	Sunday- Reduce headway from 30 min to 20 min from 9:00 am to 7:00 pm (10 hours).		1,200		2019		
24	Sunday- Introduce service from 9:00 am to 7:00 pm (10 hours; 60 min headway).		600		2019		
	Saturday- Introduce service from 6:30 pm to 9:00 pm (2.5 hours, 60 min headway).		130		2019		
31	Route Modification- Realign route to Tokala Trail				2019		
92	Weekday- Reduce headway from 20 min to 15 min from 7:00 am to 10:00 am and 2:00 pm to 7:00 pm (8 hours)		3,542	1	2019		
System Wide	Service Hour Change- Extend Sunday routes to start at 7:00 am to 9:00 am system-wide (same headway as 9:00 am run)- Routes 1,2,3,4,5,6,7,9,10,11,12,13,14,15,16,17,20,21,22,26,32		4,200		2019		
System Wide	Service Hour Change- Extend weekday routes to end an hour later from 12:00 am to 1:00 am system wide (same headway as hour prior).		8,300		2019		