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Item No. 12.1.3
Transportation Standing Committee
March 24, 2016

TO: Chair and Members of Transportation Standing Committee

Original Signed

SUBMITTED BY:

Dave Reage, MCIP, LPP, Acting Director, Halifax Transit

DATE: March 9, 2016

SUBJECT: **Halifax Transit Moving Forward Together Plan**

ORIGIN

On February 26, 2013, Regional Council approved the planning process for the new Metro Transit five-year strategic framework:

MOVED by Councillor Karsten, seconded by Councillor Nicoll that Halifax Regional Council approve the Metro Transit planning process for a new, five-year strategic framework.

On January 14, 2014, Regional Council unanimously endorsed the Moving Forward principles and a change in scope for the *Moving Forward Together Plan* to include a network-wide review:

MOVED by Councillor Watts, seconded by Councillor Whitman that Halifax Regional Council:

1. Endorse the four (4) Moving Forward principles; and

2. Endorse the change in scope of the “Moving Forward Together Plan” from a five year plan to an overall system review, as outlined in the January 8, 2014 report to Committee of the Whole.

LEGISLATIVE AUTHORITY

Section 69(1) of the Halifax Regional Municipality Charter provides the legislative authority for the municipality to provide a public transportation service. Section 79(1)(o) provides the authority for Council to expend money required by the municipality for public transportation services.

In addition to the Halifax Regional Municipality Charter, authority is also provided by Section T-5 of the 2014 Regional Municipal Planning Strategy which reads “Transit Service Plans shall be prepared at regular intervals for consideration by HRM. These plans will be developed in consultation with the public and other stakeholders and, upon adoption by HRM, shall provide guidance for investment in transit services.”

RECOMMENDATION

It is recommended that the Transportation Standing Committee recommend that Regional Council:

1. Approve the 2016/2017 Halifax Transit Annual Service Plan;
2. Approve the *Moving Forward Together Plan* as the strategic direction for the growth and development of the Halifax Transit network;
3. Approve the Moving Forward Principles as the guiding principles for Halifax Transit over the life of the *Moving Forward Together Plan*;
4. Direct staff to prepare for implementation of the future transit network as described in the Plan and Appendix A Network Maps; and
5. Adopt the Performance Measures, including the Ridership Guidelines, as described in Part 6 of the *Moving Forward Together Plan*.

BACKGROUND

On February 26, 2013, Regional Council initiated the development of a new five year strategic planning framework for Metro Transit (called *Moving Forward Together: The Metro Transit Five Year Service Plan*).

A multifaceted public and stakeholder engagement plan for the first round of consultation was developed and presented to the Transportation Standing Committee in July of 2013. The formal public and stakeholder engagement process began in August of 2013, and continued until October 15, 2013.

Based on the feedback received in consultation in January 2014, Regional Council endorsed a broadened scope for the *Moving Forward Together Plan* which included a redesign of the existing transit network. Regional Council also unanimously endorsed the four Moving Forward Principles, the foundation upon which the draft plan was developed. The principles are:

1. Increase the proportion of resources allocated towards high ridership services.
2. Build a simplified transfer based system.
3. Invest in service quality and reliability
4. Give transit increased priority in the transportation network

DISCUSSION

The draft *Moving Forward Together Plan*, including the proposed future transit network, was released for public consultation in February 2015. The subsequent ten week engagement process was the most diverse and comprehensive consultation strategy ever undertaken by the municipality. The following describes the variety of opportunities for consultation provided to members of the public and stakeholder groups.

Engagement Overview

MakeTransitBetter.ca: The primary means of gathering public feedback was through an online survey on *MakeTransitBetter.ca*. Resources on the website included an introductory video, an interactive map, and the proposed changes to the Halifax Transit network. This website allowed residents to access information on proposed routing and frequencies in order to understand the impact the proposed changes would have on their transit trips. The website resulted in over 50,000 unique website visitor and 15,370 survey responses.¹

Pop-Up Engagement Events: These were hosted in high traffic locations throughout the transit service area to create awareness and encourage online participation. Transit staff were on hand to answer questions directly and people were encouraged to provide their feedback online at *MakeTransitBetter.ca*.

¹ Of which 11,607 were complete surveys

At the end of the consultation period, Halifax Transit had hosted 20 pop up engagement events and interacted with 2,480 individuals.

Stakeholder Consultation Sessions: The purpose of the stakeholder sessions was to provide a thorough briefing on the draft plan to those organizations which were considered stakeholders in the process. At these events, transit staff answered questions, and gathered valuable feedback on the strengths of the plan and on how it could be improved. Three stakeholder sessions were held in the first week of consultation, and a fourth one was held near the end of consultation in order to ensure that all groups who were interested had the opportunity to participate. A total of 37 groups or agencies took part.

ShapeYourCityHalifax.ca: The City's online engagement portal served as a source of comprehensive information and provided the opportunity for deeper engagement through discussion forums. At the end of the 10 week consultation period, the site had hosted 2,190 unique visitors, of which 605 provided their feedback either via a submitting a comment or question, posting on a forum, or participating in a quick poll.

Public Opinion Research: Two telephone surveys were conducted by Corporate Research Associates as part of the Halifax Urban Report, one in February and again in May 2015. This survey was used to measure the impact of the engagement program on public awareness of the changes coming to Halifax Transit and to assess the level of public support for the proposed network redesign. A sample of 800 Halifax residents indicated that there was a 65% awareness of proposed network changes (an increase of 14% over the 10-week engagement period), and a 73% level of public support for proposed changes.

Twitter Town Halls: Twitter Town Halls are informal consultation sessions which allow interested members of the public to engage in a Town Hall style meeting online. Using the hashtag #MakeTransitBetter, participants could "tweet" questions about the draft plan and have their questions answered in real time by Halifax Transit staff. As part of the consultation strategy, two Twitter Town halls were held in April 2015. These events facilitated direct engagement with residents and allowed significant distribution of information to, and through, Halifax Transit's more than 23,000 Twitter followers. These events together hosted 173 participants, and resulted in 486 tweets.

Written submissions: Stakeholder organizations were invited to make formal submissions on behalf of their organizations, providing their detailed feedback on the draft Plan. Seven organizations made submissions by email at movingforward@halifax.ca. Nearly 1,000 email submissions were received by Halifax Transit over the 10 week consultation period, consisting of both questions and comments.

Feedback Summary

Halifax Transit staff reviewed over 20,000 comments received through the consultation period, each of which was considered by Halifax Transit staff. In reviewing the feedback, a number of themes emerged.

Attachment A includes a summary of the fourteen comments most frequently heard through consultation, the approximate number of comments received related to the topic, and how the comments were or were not addressed in the revised plan. All feedback was reviewed carefully, and the revised Moving Forward Together Plan was able to address many of the concerns raised by the public. However, requests for changes that were not consistent with the Moving Forward Principles were not accommodated, as well as those that would have required resource reallocation from higher ridership services.

A number of comments were received which were not specifically about transit routes. Many of these comments can be grouped into the following broad categories:

- The draft *Moving Forward Together Plan* did not make a strong enough commitment to Transit Priority Measures;
- The *Moving Forward Together Plan* does not address the quality of customer service;
- The *Moving Forward Together Plan* implementation should be shorter; and
- Features of the *Halifax Transit Technology Plan* should be implemented faster.

Where applicable and feasible, changes were made in the plan to address incorporate feedback. Changes were subject to feedback being aligned with the Moving Forward Principles outlined above.

The Moving Forward Together Plan

The proposed transit network outlined in the revised *Moving Forward Together Plan* (Attachment B) represents a significant improvement to existing transit service in Halifax. It prioritizes service to areas with high ridership and areas with higher ridership potential. It proposes new service in growth areas such as the Governors Brook subdivision, Washmill Lake Road and West Bedford. It reduces inefficient, low ridership services. It describes a network which is easier to understand and easier to navigate for existing and potential transit users, and identifies a clear need for the introduction of Transit Priority Measures in order to make transit service faster and more competitive with private vehicles. It provides a more consistent and cohesive approach to service provision, designed to better meet the needs of residents today and into the future.

The Plan furthers the four Moving Forward Principles identified by residents and endorsed by Regional Council in the following ways:

Building on the Principles

The *Moving Forward Together Plan* **increases the proportion of resources allocated towards high ridership services** by establishing ten high ridership Corridor Routes that form the spine of the transit network, providing expanded commuter focused services to move large volumes of passengers during peak periods, providing coverage service in off-peak periods, and by reducing or eliminating low ridership services. The plan also includes performance measures intended to provide direction related to the level of ridership expected, and measuring the success of the routes described in this plan.

The *Moving Forward Together Plan* works toward **building a simplified transfer based network** by being designed to facilitate transfers, reducing redundancy, streamlining routes and making the network easier to understand. This principle is also furthered by proposing improvements to passenger amenities, and the introduction of two new off-street facilities: the Wrights Cove Terminal in Burnside, and a West Bedford Park & Ride.

The *Moving Forward Together Plan* **invests in service quality and reliability** by proposing to address capacity, demand, frequency and service issues on existing routes during the implementation process. This is accomplished by using route structures which support schedule adherence and shorter travel times, by balancing fleet recapitalization and fleet expansion, and by applying quality of service guidelines.

The *Moving Forward Together Plan* works to **give transit increased priority in the transportation network** by supporting the implementation of transit priority measures (TPMs) in both the short term and long term, prioritizing TPMs in key transportation corridors, and by seeking opportunities for low cost TPMs. Although this plan does not include an exhaustive list of large scale TPMs, two critical areas (Bayers Road and Gottingen Street) have been identified as corridors which require significant investment in TPMs. A further 11 additional locations have been identified that provide more immediate opportunities for intervention.

Implementation Timeline

In the short term, implementation of the Plan will be focused on reconfiguring the existing route network to adopt the proposed redesigned network. This will take place over approximately five years, in phases based loosely on geographic areas. In the longer term, implementation of the Plan will consist of balancing investments in service quality and reliability with the introduction of new services, both in developing areas, and within the existing network.

Fiscal Year 2016/2017: The first phase of implementation for the *Moving Forward Together Plan* will be undertaken. As this year will also see the introduction of significant technology advancements, including the launch of real time public interface delivery and stop announcements, the resultant routing changes are necessarily minor to accommodate staff and resource availability. In addition, route changes are limited during this period as a relatively static transit network is critical in order to thoroughly test and ensure the success of new technology features such as stop annunciation.

Changes which would take place during the 2016/2017 fiscal year include:

- An additional trip on the Route 330 Tantallon; and
- Changes to Route 56, discontinuing service to Portland Hills Terminal and introducing a new connection to Bridge Terminal.

These changes are described in more detail in 2016/17 Halifax Transit Annual Service Plan (Attachment C).

Fiscal Year 2017/2018: The second phase of implementation for the *Moving Forward Together Plan* will be undertaken. This will also primarily include smaller changes, and will include the elimination and realignment of low ridership routes/route segments (Routes 402, School Specials), the introduction of some additional express service (Route 186, 330), and changes to several routes (Routes 6, 22, 7, 370).

Fiscal Year 2018/2019: The third phase of implementation for the *Moving Forward Together Plan* will be undertaken. This will primarily include changes to routes in Clayton Park, Fairview, and Timberlea. This phase coincides with the expansion of the Burnside Transit Centre.

Fiscal Year 2019/2020: The fourth phase of implementation for the *Moving Forward Together Plan* will be undertaken. This will primarily include implementation in Spryfield and parts of the Halifax Peninsula.

Fiscal Year 2020/2021: The last phase of adopting the new transit network will be undertaken. This will primarily include the implementation of routes in Sackville and Bedford. It includes the introduction of the Wrights Cove Terminal, West Bedford Park & Ride and the Margeson Drive/Middle Sackville Park & Ride. It will also include the implementation of routes in Dartmouth, Eastern Passage, and Cole Harbour.

Accelerating Plan Implementation

Recognizing that changes to the transit network described in the *Moving Forward Together Plan* represent a substantial improvement to quality of service for users, Halifax Transit staff will look for opportunities to, where possible, accelerate the implementation of the plan. This may be possible if over the implementation period, opportunities to streamline or create efficiencies in the implementation process arise. However, a commitment to a shorter implementation timeline at this early stage is not recommended for the following reasons.

Resource Availability

There are significant cost implications, both capital and operating, to accelerating plan implementation. In order to provide high quality transit service which better meets the needs of Halifax residents into the future, the revised *Moving Forward Together Plan* includes a significant increase in the level of service provided on road today, particularly in the busiest parts of the network. As a result, the number of transit vehicles, operators, and service hours required for implementation includes the use of all existing resources, as well as additional expansion resources that are anticipated through the budget process.

A shorter implementation period would require front loading bus purchases currently anticipated for purchase over the five year implementation period of the plan. In addition to this, the associated operating costs including labour, maintenance, and fuel would also be required sooner than anticipated. Planned capital investment in new facilities such as Wrights Cove Terminal would also need to take place earlier than currently forecasted, and other capital projects may need to be delayed as a result. To accommodate the increased funding required to accelerate the implementation, it may be necessary to

increase the existing Local Transit Area Rate, increase transit fares, or delay the implementation of other capital projects.

Planning and Scheduling Lead Time & Capacity

The changes required to implement the *Moving Forward Together Plan*, in terms of analysing schedule adherence data, scheduling new routes, and making on-street bus stop changes, are significant. It is critical to the integrity of the plan that the new routes be implemented with a high degree of accuracy and reliability. To these ends, the revised Plan proposes implementation in large phases based on geographic areas, with one to two phases being implemented each year. By phasing in implementation over time, any issues which arise through the implementation process may be resolved and lessons can be applied to subsequent phases.

It is anticipated that due to the volume and nature of changes required, each of these phases, which could include ten to fifteen transit routes, would require scheduling staff to begin scheduling the changes approximately one year in advance of the changes taking effect. The additional workload required by an accelerated timeline cannot be accommodated by existing Halifax Transit staff resources. Accelerating the implementation timeline would require additional resources which would impact the operating budget.

Integration with Technology Roadmap

The implementation of the *Moving Forward Together Plan* coincides with the roll out of several significant technology projects; including the Computer Aided Dispatch/Automatic Vehicle Location (CAD/AVL) project, stop annunciation, fare management, and a scheduling software upgrade or replacement. These initiatives have a number of dependencies, including the collection and reporting of schedule adherence data to support the implementation of the *Moving Forward Together Plan*, and the need for bus stops, routing, and schedules to be static during the testing and implementation of key technology initiatives.

In addition, the technology projects and the *Moving Forward Together Plan* all require significant Planning & Scheduling staff resources to be successful. As such, a balance of staff resources is required between the two significant undertakings, and should the *Moving Forward Together Plan* timeline be accelerated, there would be increased risk to the timelines and success of both projects.

Risk Management

Overall, any efforts to accelerate the implementation timeline result in a substantial increase in the level of risk to the project, both in the ability to meet timeline commitments, to stay within budget, and to the quality of the resultant transit service provided.

FINANCIAL IMPLICATIONS

There are no financial implications associated with this report. Changes proposed for the 2016/2017 fiscal year fit within the proposed 2016/2017 budget, and changes proposed for future years will be subject to future budget approval processes.

COMMUNITY ENGAGEMENT

As outlined in the Background and Discussion sections above, public consultation on the draft *Moving Forward Together Plan* included a large number of ways for citizens and stakeholder groups to provide insight and direction into plan refinement.

ENVIRONMENTAL IMPLICATIONS

It is anticipated that the *Moving Forward Together Plan* will increase transit ridership, potentially reducing private vehicle usage. This would result in a reduction of greenhouse gas emissions.

ALTERNATIVES

The Committee could choose to not recommend approval of the plan. This is not recommended as it was developed based on the Regional Council endorsed Moving Forward Principles and in consultation with the various stakeholders and the larger public.

ATTACHMENTS

Attachment A: Public Consultation Feedback Summary Table

Attachment B: Moving Forward Together Plan

Attachment C: 2016/17 Halifax Transit Annual Service *Plan*

A copy of this report can be obtained online at <http://www.halifax.ca/commcoun/index.php> then choose the appropriate Community Council and meeting date, or by contacting the Office of the Municipal Clerk at 902.490.4210, or Fax 902.490.4208.

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Geographic Area	Approximate Number of Comments Received	Comments	Does revised plan address these concerns?	Rationale
West End Peninsula	600-700 comments, and a petition with 408 signatures	<ul style="list-style-type: none"> Keep the Route 1 as it is (servicing Bayers Road and Oxford Street) Replacement with the proposed Route 24 is inadequate for Oxford Street Changing the Route 1 will disconnect the West End of the Peninsula from downtown Service in two directions on Gottingen Street is good 	Yes	The existing Route 1 routing is proposed to be retained in the West End Peninsula. The Revised Plan proposes that the Route 1 will travel on Oxford Street and Bayers Road. This Plan identifies urgent need for Transit Priority Measures in the Bayers Road corridor in order to provide reliable service to transit users on this and other routes. In the interim, the proposed service would be removed from Bayers Road in PM Peak in outbound direction, and instead would travel on Roslyn Street or another alternative route in order to avoid delays due to traffic congestion.
Sackville, Bedford & Bedford Highway	550 – 600 comments	<ul style="list-style-type: none"> Keep the Route 80 servicing Robie Street and Spring Garden Road; these connections to Dalhousie and the Hospital are important Keep Route 80 the same, connection from Bayers Road to Bedford Highway is important Having a fast trip downtown is good, but most riders' destinations are on Spring Garden Road or Robie Street, not at Scotia Square Routes 80 and 90 carry many students; the proposed alignment would not serve Universities well 	Yes	The proposed Route 8 has been amended to reflect the routing of the existing Route 80. The route will continue to service Robie Street and Spring Garden Road in order to retain important connections to Bedford Highway, hospitals, shopping districts, and universities. In addition, to address the comments from residents who wanted a faster way from the Bedford Highway to downtown, the revised plan proposes the introduction of the Route 93. This Route will travel during peak periods only, and will provide a shorter trip to downtown Halifax.
Purcells Cove	450 – 500 comments, and a petition with approximately 300 signatures	<ul style="list-style-type: none"> Retain the Route 15 as it is today, do not discontinue service past Williams Lake Road 	Yes	In 2015, the 11km round trip between York Redoubt and Williams Lake Road saw 52 boardings per day, operating at a cost of \$18.18 per person. This represents an increase over previous years, which saw a cost of \$32.56 per passenger. This increase may be attributable to the communities' efforts to increase ridership on the service. As the bulk of passengers using the Route 15 travel during AM and PM peak hours, proposed routing in revised plan reintroduces peak-only transit service beyond Williams Lake Road to York Redoubt, in the form of the Rural Route 415.
North End Peninsula	300 – 350 comments	<ul style="list-style-type: none"> Keep routing in North End Halifax; there are many steep hills, difficult to walk around or to walk further to bus stop 	Yes	The revised plan includes changes to the Route 7 which strikes a balance between streamlining the route and retaining the existing routing. The revised route includes bidirectional service on Kencrest Avenue and Glebe Street to improve accessibility for residents. Currently, service is only provided in one direction on these streets. The revised plan does not include service on one block of St. Paul's Street or one block of Vestry Street as currently provided. This represents removal of service to two bus stops.
Clayton Park	130 – 200 comments	<ul style="list-style-type: none"> The proposed network does not provide adequate service to Mount St. Vincent University from Clayton Park Need for a direct connection between Mount Saint Vincent University and Dalhousie University The trip from Clayton Park to the Hospitals and Downtown Halifax should not require a transfer 	Yes	Changes to proposed Route 8 to reflect the existing routing of the Route 80 as well as revisions to the Route 90 improve the connections between Clayton Park/Fairview and the Bedford Highway to Mount St. Vincent University and Dalhousie University. Changes to the proposed corridor Route 4 also improve connections between Clayton Park and downtown to the Hospitals and Dalhousie University.
Herring Cove to Hospital	150-200 comments	<ul style="list-style-type: none"> Retain the existing Route 20 routing around the hospitals. 	Yes	The proposed corridor Route 9 was revised to reflect the existing routing of the Route 20. Therefore, the trip from Herring Cove and Spryfield to the Hospital would be the same in the proposed network as it is today.
Porters Lake, Grand Desert, West Chezzetcook, Seaforth	110-130 comments	<ul style="list-style-type: none"> Do not truncate the Route 401 and eliminate service in Grand Desert/Chezzetcook 	No	The proposed routing in revised plan is the same as proposed routing in draft plan. The Route 401 in revised plan terminates at Porters Lake Park & Ride. The land uses adjacent to this segment of the route are rural in character and low density, and experience very low ridership. In February 2016, this route had approximately 7 boardings per day, and operated at a cost of approximately \$81.20 per person.
Quinpool Road	100- 125 comments	<ul style="list-style-type: none"> It is important to retain some service on Quinpool Road near the rotary as many seniors live in the area and need hospital access 	No	The proposed routing in revised plan is the same as proposed routing in draft plan. Quinpool Road, between Connaught Ave. and the Armdale Rotary which is currently served by the Route 6, would no longer have transit service. However, most residents would still be within 500m of a bus stop on Quinpool Road, Connaught Avenue, or Chebucto Road.
Port Wallace	100 – 150 comments	<ul style="list-style-type: none"> Do not truncate the route on Charles Keating Drive, eliminating service from the last segment of this route. 	No	The proposed routing in revised plan is the same as the proposed routing in draft plan. The Route 55 in the revised plan turns around on Charles Keating Drive The land uses adjacent to this segment of the route are rural in character and low density, and experience very low ridership. In 2015, this 6km round trip between Charles Keating Drive and the end of the route saw an average of 23 boardings per day, operating at a cost of \$54.26 per person.

Beaver Bank	75-100 Comments, and a petition with 221 signatures	<ul style="list-style-type: none"> Do not shorten this route, access to Beaver Bank Villa is important 	No	The proposed routing in revised plan is the same as proposed routing in draft plan. The Route 400 would turn around at Kinsac Road. The land uses adjacent to this segment of the route are rural in character and low density, and experiences very low ridership. In Fall 2015, this route segment saw approximately 12 boardings per day, and operated at a cost of approximately \$66.32 per person.
Main Street Dartmouth	70 – 75 comments, and a petition with 2,224 signatures	<ul style="list-style-type: none"> There should be a bus on Main Street A route should exist to connect Cole Harbour to Main Street via Forest Hills Pkwy 	No	<p>Through the plan revision process, a number of options were examined to revise existing transit service to the Main Street Business Improvement District. It was noted by the Main Street Business Improvement District in their submission that residents of Cherry Brook, East Preston or North Preston may prefer a transit connection to Main Street and Mic Mac Mall rather than travelling to the Portland Hills Terminal and towards downtown via Portland Street. A survey was conducted on two routes in the area to establish the final destination of transit users, and it was discovered that the bulk of passengers were headed in a variety of destinations, with no one clear destination to inform the realignment of a route.</p> <p>The revised plan includes a large volume of transit service on sections of Main Street, Dartmouth, including one branch of the Corridor Route 10, as well as the Route 72, Route 67, and Route 54. These routes serve the largest trip generators in the area, including the Nova Scotia Community College and Tacoma Centre. Some sections of the Main Street corridor are not well suited to conventional transit service due to lack of pedestrian infrastructure, high travel speeds and very low levels of residential and employment density, particularly adjacent to the Water Commission lands where development is not permitted.</p>
Eastern Passage to Cole Harbour via Caldwell Road	A petition with 928 signatures	<ul style="list-style-type: none"> A petition was received from residents requesting that transit service connect Eastern Passage to Cole Harbour via Caldwell Road 	No	<p>An analysis of National Household Survey data and Census data indicated that there is not a high level of demand between these two locations for commuting purposes.</p> <p>Furthermore, due to the amount of undeveloped land on either side of Caldwell Road between Cole Harbour and Eastern Passage, it was determined that there are not enough ridership generators to create a viable route. In addition to these factors, anecdotally, some feedback indicated that this service is in demand due to the travel patterns of high school students from Eastern Passage, a demand which is likely to be greatly reduced once a new high school is built in Eastern Passage.</p>
Sambro	140 comments, and a petition related to Access-A-Bus with 10 signatures	<ul style="list-style-type: none"> Service should be retained in Sambro (Route 402) 	No	The revised plan continues to recommend removal of this route. In Fall 2015, the 34km round trip saw an average of 25 boardings per day, costing \$64.42 per person.
Lawrencetown	An online petition gained media attention but was not received by Halifax Transit	<ul style="list-style-type: none"> Media articles advised that an online petition requesting from Lawrencetown residents requesting transit service in their community had gathered over 300 signatures 	No	As per Regional Plan policy, the Urban Transit Service Boundary does not allow for new transit service to be introduced in Lawrencetown and it was not considered as part of this plan.

Moving Forward Together Plan



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Executive Summary

The *Moving Forward Together Plan* is intended to initiate the restructuring of the transit network and guide the implementation of service improvements. It proposes new service types, service guidelines, and performance measures, along with a network redesign.

Changes outlined in this plan will recognize the strengths in the existing network by increasing frequency of service, extending the service day, and enhancing reliability of service in key high transit ridership corridors. It will also build on the success of the existing limited stop service for commuters during peak periods. These changes are intended to improve the overall attractiveness of the Halifax Transit network, improve the experience for existing users and make transit more competitive with private vehicles.

Moving Forward Principles

The Moving Forward Principles were developed to reflect the findings of the first round of public consultation on the plan, and were endorsed by Regional Council in January 2014. These are intended to be general, values based statements to help direct the development of the plan, and also to provide guidance to decision making over the life of the plan.

These principles are:

1. Increase the proportion of resources allocated towards high ridership services.
2. Build a simplified transfer based system.
3. Invest in service quality and reliability.
4. Give transit increased priority in the transportation network.

Based on a comprehensive review of existing transit service and of current and expected travel needs, these Principles were used to develop an improved transit network that will better serve today's demands and that will more effectively accommodate the Region's growth.

Draft *Moving Forward Together Plan*

The draft *Moving Forward Together Plan* used the elements of a transfer based model that are best adapted to the geography and road network in Halifax, and built on some of the most successful services and routes currently operating in the network. It attempted to accommodate the most significant travel patterns with minimal transfers, but used transfers strategically to simplify the system and create efficiencies.

Public engagement on the draft *Moving Forward Together Plan* was carried out over a period of ten weeks from February 17 – April 24, 2015. The most common theme of public feedback during the engagement process was that the proposed network would mean a lot of change, for a lot of people. The potential impacts of the proposed changes on individuals' use of transit drove much of the specific feedback offered on the Plan.

Overall, there was strong support for the strategic direction of the Plan among stakeholders and the broader public. Proposed service enhancements were very well received, particularly the creation of Corridor Routes and expanded commuter focused services. The proposed reduction or elimination of service and the realignment of particular routes generated considerable negative response among existing riders.

Halifax Transit staff reviewed over 20,000 comments received through the consultation period, each of which was considered by Halifax Transit staff. All feedback was reviewed carefully, and the revised *Moving Forward Together Plan* was able to address many of the concerns raised by the public. However, requests for changes that were not consistent with the Moving Forward Principles were not

accommodated, as well as those that would have required resource reallocation from higher ridership services.

Building on the Principles

The *Moving Forward Together Plan* **increases the proportion of resources allocated towards high ridership services** by establishing ten high ridership Corridor Routes that form the spine of the transit network, providing expanded commuter focused services to move large volumes of passengers during peak periods, providing coverage service in off-peak periods, and by reducing or eliminating low ridership services. The plan also includes performance measures intended to provide direction related to the level of ridership expected, and measuring the success of the routes described in this plan.

The *Moving Forward Together Plan* works toward **building a simplified transfer based network** by being designed to facilitate transfers, reducing redundancy, streamlining routes, and making the network easier to understand. This principle is also furthered by proposing improvements to passenger amenities, and the introduction of two new off-street facilities: the Wrights Cove Terminal in Burnside, and a West Bedford Park & Ride.

The *Moving Forward Together Plan* **invests in service quality and reliability** by proposing to address capacity, demand, frequency, and service issues on existing routes during the implementation process. This is done by using route structures which support schedule adherence and shorter travel times, by balancing fleet recapitalization and fleet expansion, and by applying quality of service guidelines.

The *Moving Forward Together Plan* works to **give transit increased priority in the transportation network** by supporting the implementation of transit priority measures (TPMs) in both the short term and long term, prioritizing TPMs in key transportation corridors, and by seeking opportunities for low cost TPMs. Although this plan does not include an exhaustive list of large scale TPMs, two critical areas (Bayers Road and Gottingen Street) have been identified as corridors which require significant investment in TPMs. A further 11 additional locations have been identified that provide more immediate opportunities for intervention.

Implementation

The *Moving Forward Together Plan* is intended to guide Halifax Transit service improvements for the next 20 years or more. In the short term, implementation of the Plan will be focused on reconfiguring the existing route network to adopt the proposed redesigned network. This will take place over approximately five years, in phases based loosely on geographic areas. In the longer term, implementation of the Plan will consist of balancing investments in service quality and reliability with the introduction of new services, both in developing areas, and within the existing network.

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Appendices

- A. Network Maps**
- B. Detailed Route Descriptions**
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- E. Cost/Benefit Analysis of Transit Priority Measures**

Part 1: Background





1 Background

Public transit has been a part of the Halifax landscape since the early 1800s, when The Sherbrooke, a horse powered ferry, entered into service with the Halifax Steam Boat Company. For almost 200 years, transit vehicles have provided a cost effective, efficient means to get around for generations of residents and visitors.

Recent investment in transit services has had a large impact on the quality, accessibility, and availability of transit in Halifax. In the past 10 years, total service hours have increased by 63%, and today, Halifax Transit provides more service hours per capita than any other Canadian transit property serving a similar population size.

Halifax Transit provides an integrated public transit system for over 300,000 residents living in communities within the Halifax Regional Municipality, using 65 routes and a fleet of 325 vehicles, 100% of which will be low floor accessible by the end of 2016. Transit is recognized as a key element in addressing economic, environmental, land use, and transportation objectives of the Municipality, in the face of both a changing landscape and dynamic population.

The overall structure of the existing transit network is a radial grid, with the primary focus of most routes on either downtown Halifax or downtown Dartmouth. In the more rural parts of the Region, routes tend to converge at the nearest terminal, where passengers can transfer to routes which travel downtown. Some routes are notable exceptions, and provide direct trips across town, not directly serving the downtown core.

The 2016 Halifax Transit Network

- 65 Fixed Routes
- 325 Buses
- 5 Ferries
- 13 Terminals
- 2 Garages
- 16 Terminals and Park & Ride Lots
- Over 26.2 million boardings per year

Although there has been substantial growth and expansion in recent years, the underlying transit network has not seen significant changes since the early 1990s. Many routes on the road today have remained largely unchanged for decades, despite the fact that in the intervening years, there have been significant changes to adjacent land uses and travel patterns.

The transit network today reflects the thinking of a number of different transit planning ideologies, and as a result the network does not operate as a cohesive system, but rather as a complex web of routes which do not always complement one another or integrate well. The existing network is difficult to learn, and its complexity has become a barrier to many potential transit users.

1.1 Halifax Transit Mission Statement

Halifax Transit's Mission Statement is as follows:

“Working together to provide a safe, reliable and sustainable transit system for all.”

This mission statement is applicable to all facets of Halifax Transit's organization, including the development of this plan. This plan has been prepared through collaboration with Halifax Transit staff, other municipal departments, and the public. Implementation of the *Moving Forward Together Plan* will assist in achieving this mission statement by increasing the reliability and sustainability of the transit network.

1.2 About The *Moving Forward Together Plan*

The *Moving Forward Together Plan* is intended to initiate the restructuring of the transit network, and guide the implementation of service improvements. It proposes new service types, service guidelines, and performance measures, along with a network redesign.

In alignment with the Halifax Transit Mission Statement, changes outlined in this plan will recognize the strengths in the existing network by increasing frequency of service, extending the service day and enhancing reliability of service in key high transit ridership corridors. It will also build on the success of the existing MetroLink and Urban Express services, which offer limited stop service for commuters during peak periods. These changes are intended to improve the overall attractiveness of the Halifax Transit network, improve the experience for existing users and make transit more competitive with private vehicles.

1.3 Related Initiatives

The *Moving Forward Together Plan* is part of a bigger picture for growth and development in Halifax. In addition to this plan, there are a number of other plans and programs being undertaken by Halifax Transit and other Municipal Business Units to make transit and active transportation more attractive and accessible.

Some of these plans and programs are described below:

The Regional Municipal Planning Strategy: As noted above, The Regional Plan for Halifax establishes a long-range, region-wide strategy which outlines where, when, and how future growth and development should take place. Regional Council began research associated with the development of a regional plan in the fall of 2001 to ensure future growth is both fiscally and environmentally sustainable. The Regional Municipal Planning Strategy (or The Regional Plan) was approved in 2006, and the first five year review concluded when the 2014 Regional Plan was adopted on October 18th, 2014. Among the themes and actions underlying the first five year review is a focus on growth centres and corridors, appropriately designed transit service, improvements in the experience of transit users, the enhancement of transit service in appropriate areas, and increasing transit ridership while reducing single-occupant vehicle trips.

The Integrated Mobility Plan: This plan, currently under development, is intended to be a strategic plan specifically aimed at increasing the modal split of sustainable forms of transportation as per the Regional Plan. The Integrated Mobility Plan will help to direct our future investment in transportation demand management, transit and the active transportation and roadway network. The plan will also strive to identify the two-way inter-relationship between growth patterns and investment in mobility. The plan will examine a variety of scenarios and will test the ability of each to address the need to link people and communities with each other and with the goods, services and employment opportunities which they seek, in an environmentally sensitive, socially beneficial and fiscally responsible manner. A choice of interconnected travel modes can form a powerful tool for shaping future development. For this to occur, new investments in infrastructure or services should be strategically planned in conjunction with land use and coordinated with all levels of government. The scope of the project will include factors that influence demand, sway mode choice, affect life cycle costs and contribute to the economy of the region. The plan will clearly state Council's priorities for investment and their relationship to growth patterns: regional centre, in-fill within the urban service boundary and extension of the urban service boundary.

The Halifax Transit Technology Plan: In 2012, Halifax Transit partnered with Halifax's Finance and Information, Communication and Technology department to develop a five year strategy to adopt new

technology in Halifax Transit's operations and customer service platforms. This ambitious plan represents an approximately \$44 million dollar commitment by Regional Council to improve the efficiency of the transit operations and ridership experience. The final strategy, titled *A Transit Technical Solutions Roadmap*, includes approximately 30 new projects.

While some of the proposed projects will not impact customer service directly, the replacement of Halifax Transit's current Computer Aided Dispatch (CAD) and Automatic Vehicle Location (AVL) systems will set the groundwork for customer service-related projects such as public interfaces, stop announcement and a fare management system.

Halifax Active Transportation Priorities Plan (2014): The Halifax Regional Municipality Active Transportation Functional Plan identifies the approach that the municipality will take to meet the modal share objectives to double the number of residents who choose to walk or bicycle. The 2014-2019 Halifax Active Transportation Priorities Plan provides an update of the 2006 plan and identifies the candidate routes and facility types for urban, suburban and rural areas of the municipality for both on and off-road facilities and identifies priority initiatives for the next five years. Many of the key projects recommended in the Active Transportation Priorities Plan provide improved active transportation connections to key transit facilities.

Rural Transit Funding Program: Recognizing that the Halifax Transit service model may not be the most appropriate service in rural communities, Regional Council has approved the Rural Transit Funding Program, which provides funding support to community organizations offering transit services to residents. Approved in August 2014, as of December 2015, two rural transit service providers receive funding through this program.

Metro Transit Universal Accessibility Plan: The intent of the Universal Accessibility Plan prepared in 2011 is to improve the overall accessibility of the Halifax Transit fixed route bus and ferry system. This plan is used to inform development of Halifax Transit infrastructure and communication materials.



Figure 1: Bicycle Repair Facility at Lacewood Terminal

1.4 Development of The *Moving Forward Together Plan*

On February 26, 2013, Regional Council initiated the development of the new five year strategic planning framework for Halifax Transit. At this time, it was anticipated that the planning process would take approximately one year to complete, and would include two rounds of public consultation.

A multifaceted public and stakeholder engagement plan for the first round of consultation was developed and presented to the Transportation Standing Committee in July of 2013. The formal public and stakeholder engagement process began in August of 2013, and continued until October 15th, 2013.

1.5 Values Based Consultation

1.5.1 First Round of Consultation

The initial round of public consultation was values based and was intended to provide an overall direction for the plan's development. Participants were asked to think big and to tell Halifax Transit how it should grow, expand, and prioritize resource investment for the next five years.

In order to engage as many people as possible, a diverse public engagement strategy was developed and heavily promoted in print ads, over the radio, through social media, bus advertisements, and through a direct mail-out.

The public engagement strategy included the following elements:

- Stakeholder meetings;
- Public meetings;
- Online engagement; and
- Online and paper-based surveys.

Due to the diversity of engagement opportunities, participants represented all districts in the Municipality, and approximately one quarter of survey participants were not regular transit users.

The following summarizes participation in the engagement process:

- 25 stakeholder groups participated in three stakeholder meetings;
- 135 individuals participated in six public meetings;
- 2,115 registered site users on the project website;
 - 1,600 online surveys were completed;¹
- Approximately 60 paper surveys were completed;
- Over 130 email submissions were received.

¹ This significantly exceeds the number of surveys generally required to be considered statistically valid (one survey for every 1,000 residents or a total of 400- 500 surveys).

1.5.2 Consultation Summary

All participants were asked to provide feedback on four key themes. The following summarizes the overall findings of the public engagement activities in the first round of public consultation, organized by theme.

What should the Goal of the network be?

This discussion demonstrated that diverse opinions exist about why public transit is important to the Municipality. Overall, participants indicated that a shift towards higher ridership services should be the priority in the next five years, however there was some recognition of the importance of services that have lower ridership. While there was some discussion about the importance of low ridership routes in less dense areas, the majority of participants who felt low ridership services were important were focused on maintaining or increasing key services in the off-peak periods.

What role should transfers play in the Halifax Transit network?

Across all public engagement activities, participants indicated strong support for increasing the role of transfers in the Halifax Transit network if it resulted in shorter, more reliable and frequent routes. This support was contingent on the following conditions being met:

- The frequency of connecting transit services is high;
- The use of transfers make the total trip time faster;
- There is appropriate infrastructure so that passengers are comfortable while waiting for their transfer; and
- Service is reliable so that connections are not missed.

How should resources be split between maintaining the existing network and increasing service?

Participants consistently indicated that both the maintenance of existing service and the introduction of new service were important, although many agreed that there should be slightly more emphasis on improving the reliability of the existing service.



Figure 2: Public Consultation Fall 2014

What role should Transit Priority Measures play in the Halifax Transit network?

Overall, there was strong support for the implementation of Transit Priority Measures (TPMs), but many noted that each situation must be carefully considered to ensure that the right measure is implemented in the right location. Both regular transit users and non-transit users agreed that TPMs play a key role in increasing the reliability of transit, and in making it more attractive and user-friendly.

1.6 Developing the Moving Forward Principles

The results of the values based consultation were used to develop the Moving Forward Principles, the foundation on which the plan is designed. The Moving Forward Principles were developed to reflect the findings of the consultation, and were endorsed by Regional Council in January 2014. These are intended to be general, values based statements to help direct the development of the plan, and also to provide guidance to decision making over the life of the plan. They are explored further in this document.

These principles are:

5. Increase the proportion of resources allocated towards high ridership services.
6. Build a simplified transfer based system.
7. Invest in service quality and reliability.
8. Give transit increased priority in the transportation network.

In order to ensure that the transit network best meets the intent of the Moving Forward Principles, Regional Council approved an expansion in the initial scope of work proposed as part of the *Moving Forward Together Plan* to include a comprehensive review of the entire transit network, and an increase in the life of the plan beyond the five year horizon.

1.7 Drafting the Plan

Following direction from Regional Council in January 2014, Halifax Transit began the process of conducting a comprehensive review of the transit network in order to propose a draft plan and network design that has a consistent, cohesive, approach to transit planning, reconciling the inconsistencies in the existing network.

The development of the Plan was informed by a variety of data sources including census Journey to Work data, the National Household Survey, ridership counts, terminal surveys, the regional VISUM traffic model, MetroLink origin-destination surveys, and proposed developments across the region. Also reviewed were a number of surveys and other documentation prepared by other organizations related to transit needs, including Capital Health, the Greater Burnside Business Association, Dalhousie University, and the Main Street Business Improvement District.

The drafting process was iterative, and focused on finding the right balance of transfer based and single seat trips for Halifax. As the network evolved, staff tested the system by comparing typical trips which are made on the Halifax Transit network today, with trips that would be made in the proposed conceptual network.

The draft *Moving Forward Together Plan* used the elements of a transfer based model that are best adapted to the geography and road network in Halifax, and built on some of the most successful services and routes currently operating in the network. It attempted to accommodate the most significant travel patterns with minimal transfers, but used transfers strategically to simplify the system and create efficiencies.

1.8 Consultation on the Draft Plan

Public engagement on the draft *Moving Forward Together Plan* was carried out over a period of ten weeks from February 17 – April 24, 2015. In order to ensure a robust consultation with as many Halifax residents as possible, Halifax Transit developed a program which focused on bringing the

engagement opportunity directly to people, where they spend their time in person and online. The engagement strategy acknowledged that people have busy lives, and aimed to make it as easy as possible to learn about the proposed transit network redesign and to provide specific feedback on how it would impact residents' transit use.

The biggest challenge through this process was to clearly articulate complex information about the proposed transit network that would allow residents to provide specific, informed feedback. To these ends, the MakeTransitBetter.ca website was developed to provide both high level and very detailed information about the changes and strategic direction proposed in the draft *Moving Forward Together Plan*.

The following snapshot of the program and participation levels demonstrates the significant interest and commitment of residents and stakeholders to engage in this process.

1.9 Engagement Activities

MakeTransitBetter.ca: The primary means of gathering public feedback was an online survey on the project website, MakeTransitBetter.ca. Resources on the website included an introductory video, interactive map, and the proposed changes to individual routes and communities. This allowed residents to access as much information as required to understand the impact of the proposed network on their use of transit prior to responding to the survey.

Results:

- The survey was available from February 17–April 24, 2015 on the Make Transit Better website
- Also available by mail upon request
- 50,000+ unique website visitors
- 15,370 survey responses, 11,607 of which were completed surveys
- Nearly 2,400 surveys were completed within the first 24 hours
- Respondents provided the first three digits of their postal codes

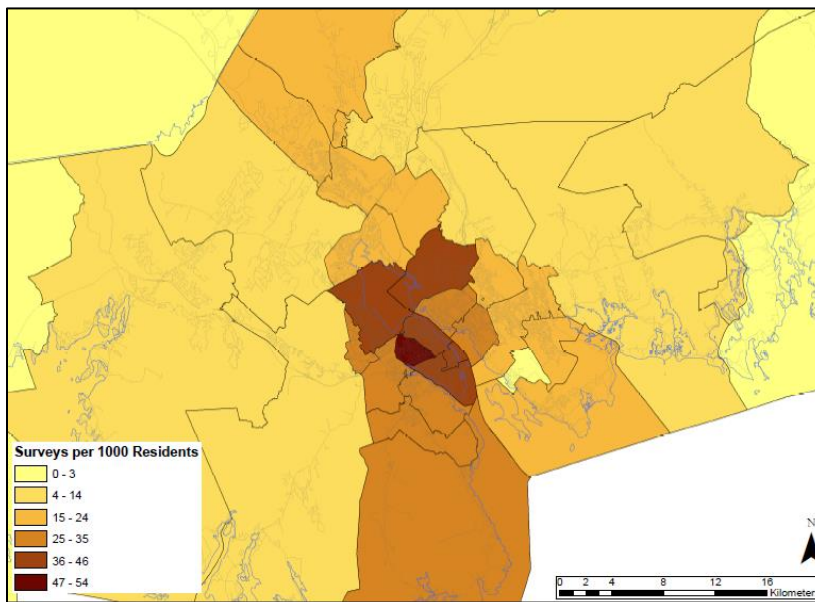


Figure 3: MakeTransitBetter.ca Survey Submissions

Pop-Up Engagement Events: These were hosted in high traffic locations throughout the transit service area to create awareness and encourage online participation. Transit staff were on-hand to answer questions directly and people were encouraged to provide their feedback online at MakeTransitBetter.ca. A number of pop-up locations were added to the schedule based on feedback from communities and members of Regional Council.

Results:

- 20 events
- 2,480 individual interactions



Figure 4: Pop Up Consultation at the Halifax Central Library

Stakeholder Consultation Sessions: The purpose of the stakeholder sessions was to provide a thorough briefing on the draft *Moving Forward Together Plan*, answer questions, and gather valuable feedback from key transit stakeholders on the strengths of the plan and possible gaps.

Results:

- Four events
- 37 organizations participated

ShapeYourCityHalifax.ca: The municipal online engagement portal site served as a comprehensive information resource and provided the opportunity for deeper engagement through discussion forums.

Results:

- 2,190 unique visitors
- 605 engaged visitors (e.g. took the quick poll, contributed to a discussion forum)

Public Opinion Research: Two telephone surveys were conducted by Corporate Research Associates (Halifax Urban Report) in February and May 2015 to measure the impact of the

engagement program on public awareness of the changes and to assess the level of public support for the proposed network redesign.

Results:

- 800 residents surveyed
- 65% awareness of proposed network changes (an increase of 14% over the 10-week engagement period)

Twitter Town Halls: Twitter Town Halls are informal consultation sessions which allow interested members of the public to engage in a Town Hall-style meeting online. Using the hashtag #MakeTransitBetter, participants could “tweet” questions about the draft plan and have their questions answered in real time by Halifax Transit staff. As part of the consultation strategy, two Twitter Town halls were held in April 2015. These events facilitated direct engagement with residents and allowed significant distribution of information to, and through, Halifax Transit’s more than 23,000 Twitter followers.

Results:

- 173 participants
- 486 tweets
- 550,000+ impressions

Written submissions: Stakeholder organizations were invited to make formal submissions on behalf of their organizations, providing their detailed feedback on the draft plan.

Results:

- Nine organizations made submissions by email at movingforward@halifax.ca.
 - Canada Revenue Agency
 - CentreCorp Management Services
 - Halifax Chamber of Commerce
 - Halifax Cycling Coalition
 - It’s More than Buses
 - Main Street Business Improvement District
 - Point Pleasant Child Care Centre
 - Royal Nova Scotia Yacht Squadron
 - St. Vladimir’s Christian Orthodox Church
- Nearly one thousand emails were received from the general public

1.10 Feedback Summary

The most common theme of public feedback during the engagement process was that the proposed network would mean a lot of change, for a lot of people. The potential impacts of the proposed changes on individuals' use of transit drove much of the specific feedback offered on the Plan.

Overall, there was strong support for the strategic direction of the Plan among stakeholders and the broader public. Stakeholders' support was qualified with specific feedback regarding opportunities for refinement of the Plan.

In addition, proposed service enhancements were very well received. Arguably best received was the proposed introduction of 10 corridors routes forming the spine of the network, and expanded Express (commuter-focused) service which were viewed as strengths.

The proposed reduction or elimination of service and the realignment of particular routes generated considerable negative response among existing riders. While there were a number of changes that generated this feedback, changes to Routes 1, 80 and 90 were mentioned most frequently.

1.10.1 Stakeholder Consultation

Stakeholder were asked to share their thoughts on how the draft *Moving Forward Together Plan* aligned with the four Moving Forward Principles, arising from the 2013 consultation process and endorsed by Regional Council. Approximately 72% indicated they felt the draft Plan was aligned with the Moving Forward Principles.

The key strengths and gaps of the draft *Moving Forward Together Plan* were identified by stakeholders as follows:

What Stakeholders Like About the Plan	What's Missing
<ul style="list-style-type: none"> • Simpler and more understandable • Eliminates redundancies • Corridor Routes as the backbone of the network • Priority given to high ridership areas • Transfer-based system • Expanded Express service • Infrastructure improvements & new terminal 	<ul style="list-style-type: none"> • Doesn't go far enough • Doesn't outline specific TPM measures • Should have higher off-peak frequency on Corridor routes • Should have longer hours of service • Should have more efficient transfers • Shorter implementation timeframe • Opposition to service reductions/elimination • No opportunity to see the updated Plan before it goes to Regional Council

1.10.2 Overview of Survey Findings

The online survey provided rich quantitative and qualitative rider and non-rider feedback on the plan.

Of 12,831 written comments relevant to this plan, 72% related to the impact of specific route changes, 19% pertained to frequency/hours of service and 11% were about transfers. The top reasons for making individuals' trips better or worse were identified as follows:

"These changes make my trip better"	"These changes make my trip worse"
1. My trip is more direct 2. I can travel more often 3. My route(s) run later or earlier 4. Transfers give me more travel options	1. My service has been reduced or eliminated 2. My trip is less direct 3. I have to transfer too much

1.10.3 Public Opinion Research

Results from a telephone survey conducted by Corporate Research Associates in early May 2015 found a 73% level of public support for the proposed changes.

1.10.4 Petitions

Additionally, some communities organized to oppose proposed changes that would affect their level of transit service, or to lobby for expanded service through organized feedback on the survey, emails or petitions. Those included:

- Route 1: West End Peninsula residents displeased with proposed changes to the Route 1.
- Route 7: North End Peninsula residents displeased with proposed changes to the Route 7.
- Route 15: Residents displeased with proposed elimination of service on Purcells Cove Road between Williams Lake Road and York Redoubt.
- Eastern Passage Connection – residents requesting a connection between Cole Harbour and Eastern Passage via Caldwell Road.
- Lawrencetown: Residents of Lawrencetown requesting transit service.
- Route 400: Residents displeased with the proposed discontinuation of service between Beaver Bank Villa and Kinsac Road along Beaver Bank Road.
- Route 401: Residents of Porters Lake displeased with the proposed removal of service from Grand Desert and Back Road.

1.11 Most Frequent Comments

The following table summarizes the most common themes emerging from consultation based on the previous draft network:

Table 1: Most Frequent Comments on Draft Network

Geographic Area	Approximate Number of Comments Received	Comments	Does revised plan address these concerns?	Rationale
West End Peninsula	600-700 comments, and a petition with 408 signatures	<ul style="list-style-type: none"> Keep the Route 1 as it is (servicing Bayers Road and Oxford Street) Replacement with the proposed Route 24 is inadequate for Oxford Street Changing the Route 1 will disconnect the West End of the Peninsula from downtown Service in two directions on Gottingen Street is good 	Yes	The existing Route 1 routing is proposed to be retained in the West End Peninsula. The Revised Plan proposes that the Route 1 will travel on Oxford Street and Bayers Road. This Plan identifies urgent need for Transit Priority Measures in the Bayers Road corridor in order to provide reliable service to transit users on this and other routes. In the interim, the proposed service would be removed from Bayers Road in PM Peak in outbound direction, and instead would travel on Roslyn Street or another alternative route in order to avoid delays due to traffic congestion.
Sackville, Bedford & Bedford Highway	550 – 600 comments	<ul style="list-style-type: none"> Keep the Route 80 servicing Robie Street and Spring Garden Road; these connections to Dalhousie and the Hospital are important Keep Route 80 the same, connection from Bayers Road to Bedford Highway is important Having a fast trip downtown is good, but most riders' destinations are on Spring Garden Road or Robie Street, not at Scotia Square Routes 80 and 90 carry many students; the proposed alignment would not serve Universities well 	Yes	The proposed Route 8 has been amended to reflect the routing of the existing Route 80. The route will continue to service Robie Street and Spring Garden Road in order to retain important connections to Bedford Highway, hospitals, shopping districts, and universities. In addition, to address the comments from residents who wanted a faster way from the Bedford Highway to downtown, the revised plan proposes the introduction of the Route 93. This Route will travel during peak periods only, and will provide a shorter trip to downtown Halifax.
Purcells Cove	450 – 500 comments, and a petition with approximately 300 signatures	<ul style="list-style-type: none"> Retain the Route 15 as it is today, do not discontinue service past Williams Lake Road 	Yes	In 2015, the 11km round trip between York Redoubt and Williams Lake Road saw 52 boardings per day, operating at a cost of \$18.18 per person. This represents an increase over previous years, which saw a cost of \$32.56 per passenger. This increase may be attributable to the communities' efforts to increase ridership on the service. As the bulk of passengers using the Route 15 travel during AM and PM peak hours, proposed routing in revised plan reintroduces peak-only transit service beyond Williams Lake Road to York Redoubt, in the form of the Rural Route 415.
North End Peninsula	300 – 350 comments	<ul style="list-style-type: none"> Keep routing in North End Halifax; there are many steep hills, difficult to walk around or to walk further to bus stop 	Yes	The revised plan includes changes to the Route 7 which strikes a balance between streamlining the route and retaining the existing routing. The revised route includes bidirectional service on Kencrest Avenue and Glebe Street to improve accessibility for residents. Currently, service is only provided in one direction on these streets. The revised plan does not include service on one block of St. Paul's Street or one block of Vestry Street as currently provided. This represents removal of service to two bus stops.
Clayton Park	130 – 200 comments	<ul style="list-style-type: none"> The proposed network does not provide adequate service to Mount St. Vincent University from Clayton Park Need for a direct connection between Mount Saint Vincent University and Dalhousie University The trip from Clayton Park to the Hospitals and Downtown Halifax should not require a transfer 	Yes	Changes to proposed Route 8 to reflect the existing routing of the Route 80 as well as revisions to the Route 90 improve the connections between Clayton Park/Fairview and the Bedford Highway to Mount St. Vincent University and Dalhousie University. Changes to the proposed corridor Route 4 also improve connections between Clayton Park and downtown to the Hospitals and Dalhousie University.
Herring Cove to Hospital	150-200 comments	<ul style="list-style-type: none"> Retain the existing Route 20 routing around the hospitals. 	Yes	The proposed corridor Route 9 was revised to reflect the existing routing of the Route 20. Therefore, the trip from Herring Cove and Spryfield to the Hospital would be the same in the proposed network as it is today.
Porters Lake, Grand Desert, West Chezzetcook, Seaforth	110-130 comments	<ul style="list-style-type: none"> Do not truncate the Route 401 and eliminate service in Grand Desert/Chezzetcook 	No	The proposed routing in revised plan is the same as proposed routing in draft plan. The Route 401 in revised plan terminates at Porters Lake Park & Ride. The land uses adjacent to this segment of the route are rural in character and low density, and experience very low ridership. In February 2016, this route had approximately 7 boardings per day, and operated at a cost of approximately \$81.20 per person.

Quinpool Road	100- 125 comments	<ul style="list-style-type: none"> It is important to retain some service on Quinpool Road near the rotary as many seniors live in the area and need hospital access 	No	The proposed routing in revised plan is the same as proposed routing in draft plan. Quinpool Road, between Connaught Ave. and the Armdale Rotary which is currently served by the Route 6, would no longer have transit service. However, most residents would still be within 500 metres of a bus stop on Quinpool Road, Connaught Avenue, or Chebucto Road.
Port Wallace	100 – 150 comments	<ul style="list-style-type: none"> Do not truncate the route on Charles Keating Drive, eliminating service from the last segment of this route. 	No	The proposed routing in revised plan is the same as the proposed routing in draft plan. The Route 55 in the revised plan turns around on Charles Keating Drive The land uses adjacent to this segment of the route are rural in character and low density, and experience very low ridership. In 2015, this 6km round trip between Charles Keating Drive and the end of the route saw an average of 23 boardings per day, operating at a cost of \$54.26 per person.
Beaver Bank	75-100 Comments, and a petition with 221 signatures	<ul style="list-style-type: none"> Do not shorten this route, access to Beaver Bank Villa is important 	No	The proposed routing in revised plan is the same as proposed routing in draft plan. The Route 400 would turn around at Kinsac Road The land uses adjacent to this segment of the route are rural in character and low density, and experiences very low ridership. In Fall 2015, this route segment saw approximately 12 boardings per day, and operated at a cost of approximately \$66.32 per person.
Main Street Dartmouth	70 – 75 comments, and a petition with 2,224 signatures	<ul style="list-style-type: none"> There should be a bus on Main Street A route should exist to connect Cole Harbour to Main Street via Forest Hills Pkwy 	No	<p>Through the plan revision process, a number of options were examined to revise existing transit service to the Main Street Business Improvement District. It was noted by the Main Street Business Improvement District in their submission that residents of Cherry Brook, East Preston or North Preston may prefer a transit connection to Main Street and Mic Mac Mall rather than travelling to the Portland Hills Terminal and towards downtown via Portland Street. A survey was conducted on two routes in the area to establish the final destination of transit users, and it was discovered that the bulk of passengers were headed in a variety of destinations, with no one clear destination to inform the realignment of a route.</p> <p>The revised plan includes a large volume of transit service on sections of Main Street, Dartmouth, including one branch of the Corridor Route 10, as well as the Route 72, Route 67, and Route 54. These routes serve the largest trip generators in the area, including the Nova Scotia Community College and Tacoma Centre. Some sections of the Main Street corridor are not well suited to conventional transit service due to lack of pedestrian infrastructure, high travel speeds and very low levels of residential and employment density, particularly adjacent to the Water Commission lands where development is not permitted.</p>
Eastern Passage to Cole Harbour via Caldwell Road	A petition with 928 signatures	<ul style="list-style-type: none"> A petition was received from residents requesting that transit service connect Eastern Passage to Cole Harbour via Caldwell Road 	No	<p>An analysis of National Household Survey data and Census data indicated that there is not a high level of demand between these two locations for commuting purposes.</p> <p>Furthermore, due to the amount of undeveloped land on either side of Caldwell Road between Cole Harbour and Eastern Passage, it was determined that there are not enough ridership generators to create a viable route. In addition to these factors, anecdotally, some feedback indicated that this service is in demand due to the travel patterns of high school students from Eastern Passage, a demand which is likely to be greatly reduced once a new high school is built in Eastern Passage.</p>
Sambro	140 comments, and a petition related to Access-A-Bus with 10 signatures	<ul style="list-style-type: none"> Service should be retained in Sambro (Route 402) 	No	The revised plan continues to recommend removal of this route. In Fall 2015, the 34km round trip saw an average of 25 boardings per day, costing \$64.42 per person.
Lawrencetown	An online petition gained media attention but was not received by Halifax Transit	<ul style="list-style-type: none"> Media articles advised that an online petition requesting from Lawrencetown residents requesting transit service in their community had gathered over 300 signatures 	No	As per Regional Plan policy, the Urban Transit Service Boundary does not allow for new transit service to be introduced in Lawrencetown and it was not considered as part of this plan.

Part 2: Building on the Principles



2 Navigating the Route Ahead – Building on the Principles

The *Moving Forward Together Plan* is consistent with the Halifax Transit Mission Statement, as described in section 1 above, and guided by the four Moving Forward Principles. The four principles are at the heart of the plan, and are the foundation upon which all objectives, network changes, and policies found within were created. Furthermore, they are intended to provide guidance to decision making over the life of the plan.

Based on a comprehensive review of existing transit service and of current and expected travel needs, these Principles were used to develop an improved transit network that will better serve today's demands and that will more effectively accommodate the Region's growth.

So how do the Moving Forward Principles translate into real change in the Halifax Transit network? This section describes how the *Moving Forward Together Plan* puts into practice the intent of the Moving Forward Principles.

2.1 Principle 1: Increase the Proportion of Resources Allocated Towards High Ridership Services.

This principle speaks to the role of public transit in building a more socially, environmentally, and economically sustainable community. Increasing the proportion of resources allocated to high ridership services will help to reduce congestion, pollution, and the need to build, expand and maintain additional roadway and parking infrastructure, while also making the service more cost effective.

High ridership services are those that transport a large number of passengers relative to the level of resources that are invested in the service. In this plan, when routes are carrying more than thirty passengers per hour, they are considered high ridership. Low ridership services, or coverage services, are those that typically carry fewer passengers, or require a higher level of resources to provide, and as a result use resources less efficiently.

To achieve this Principle, resources must be reallocated towards services that have the highest potential demand, and these services must be increased and improved to support higher ridership. This means that areas or services with low demand may have minimal service, or no service at all.

The support for an increased focus on higher ridership services is consistent with the findings of the Office of the Auditor General's Report entitled *A Systems-Level Performance Review of Metro Transit's Service Delivery*. Completed in July 2013, this report states: "It is the view of the [Office of the Auditor General that] the definition of success for Halifax Transit should [be] amended to focus on increased ridership which would result in additional revenue."

Although this principle emphasizes the importance of high ridership services and requires a shift in resources towards high ridership services, some low ridership services will continue to have an important role in the Halifax Transit network. Often, high ridership services or routes have periods of time during the day, or on weekends, when ridership is low. It is important to the overall success of these services that they operate throughout the day and evening and in some instances, high quality service will still be maintained during lower ridership periods. Additionally, some routes have lower ridership, but serve an important purpose by acting as "feeder routes" for higher ridership services. These routes are important as they allow riders to circulate within their local communities, and facilitate access to the rest of the network.

2.1.1 Achieving Principle 1: Increasing the Proportion of Resources Allocated Towards High Ridership Services

Urban Transit Service Boundary

A significant step has already been taken to direct resources to high ridership areas by creating the Urban Transit Service Boundary. The highest potential transit ridership exists within urban areas, rather than rural communities where development is spread out over a larger area. Policy T-7 of the 2014 Regional Plan establishes an Urban Transit Service Boundary, within which resources and improvements to transit service will be focused. The Urban Transit Service Boundary includes all contiguous communities in Halifax which currently have both municipal water and municipal sewer, where homes are generally closer together. Policy T-7 helps to focus investment in the areas where transit service can operate most efficiently, and also to set clear expectations for residents and businesses as to where new transit services will be added in the future.

Urban Transit Service Boundary by the numbers:

- Population of HRM: 390,328
- Population within Urban Transit Service Boundary (UTSB): 290,376 or 74.4% of the population of HRM
- Nearly 99% of residents within the UTSB are within 500 metres of a bus stop as outlined in this plan

As a result, there will be no new or increased Halifax Transit services outside the Urban Transit Service Boundary, with the exception of Regional Express services (identified as rural commuter express service in the Regional Municipal Planning Strategy).

In rural areas, development densities are not sufficiently high to warrant municipally operated fixed route transit service. Policy T-10 of the Regional Plan states that Council may consider programs to encourage and assist communities with developing their own community based transit services in the areas outside the Urban Transit Service Boundary. In August 2014, Regional Council adopted Administrative Order 2014-012-ADM to support provision of the Rural Transit Funding Program. Halifax Transit will support the development of community based transit services in rural areas that are tailored to meet the specific needs of the community through the Rural Transit Funding Program.

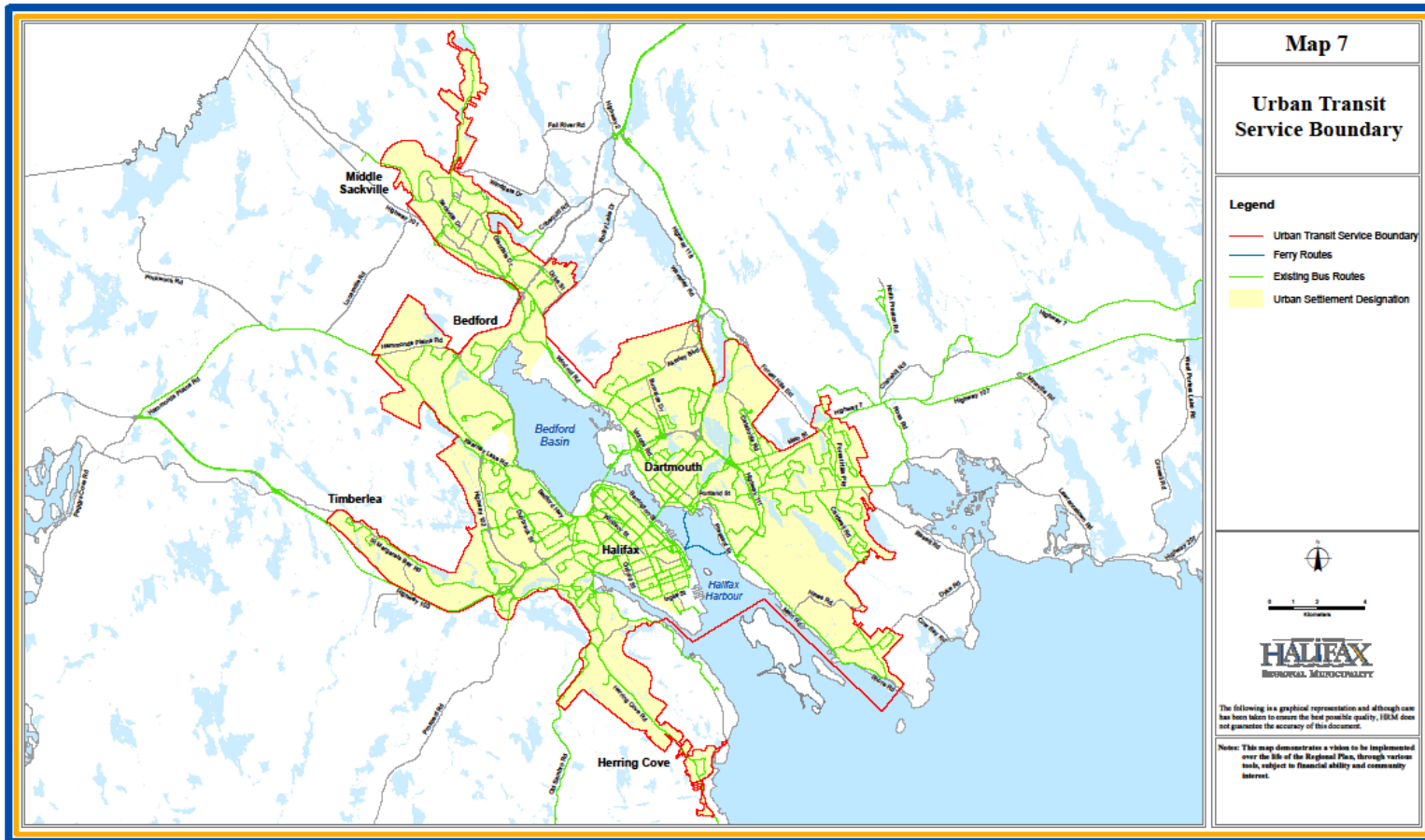


Figure 5: Urban Transit Service Boundary (Map 7, Regional Municipal Planning Strategy)

The *Moving Forward Together Plan* increases the proportion of resources allocated towards high ridership services in four key ways:

1. **Establishing Corridor Routes:** Corridor Routes are high ridership transit routes that travel along major corridors and form the spine of the transit network. This plan proposes ten Corridor Routes, which account for almost 50% of Halifax Transit's resources. They connect multiple neighbourhoods with employment, educational centres, and shopping areas, and approximately 171,000 residents are within walking distance to these routes.
2. **Expanded Express Service:** This plan proposes to build on the success of the previous MetroLink and Urban Express services and introduce a new service type. Express service is a commuter focused service that is intended to move large volumes of passengers during peak commuting periods, when transit can have the largest impact on congestion.
3. **Providing Coverage Service in off-peak Periods:** Although transit service is most efficient during peak commuting periods when demand is highest and most directional, not all travel takes place during these periods. To support Corridor and Express Routes, service must also be operated during time periods when demand is lower to accommodate trips which do not take place during traditional rush hour periods like trips to appointments, university classes, shopping destinations, and social visits. It is important that residents are able to make these trips by bus in order to live a car-free lifestyle.

Providing trips in off-peak periods can also increase ridership during peak periods, because passengers know that they can rely on the service regardless of when they decide to make their trip. This plan proposes to expand midday, evening, and weekend service on many routes to meet this objective.

4. **Reducing Low Ridership Services:** In addition to reducing service levels on low ridership routes, this plan proposes to eliminate existing underperforming routes, or segments of routes that have consistently low ridership. It also outlines the removal of service during some periods of the day on routes which do not sustain ridership during the off peak periods (evenings, weekends, midday). The Plan proposes to remove service from:
 - Prospect Road between Ragged Lake Boulevard and Exhibition Park (currently serviced by Route 22);
 - Some School Special Routes;
 - Waverley Road north of Charles Keating Drive (currently serviced by the Route 55);
 - Beaver Bank Road north of Kinsac Road (currently serviced by the Route 400);
 - Highway 207 beyond Porters Lake, to Seaforth and Back Road (currently serviced by the Route 401);
 - Purcells Cove and Fergusons Cove during the off-peak period (currently serviced by Route 15);
 - Portland Estates Boulevard & Portland Hills Drive during the off-peak period (currently serviced by Route 57); and
 - Sambro (currently serviced by the Route 402).

The following table summarizes the existing ridership and the current cost of providing transit service on the routes or portions of routes where service is to be discontinued:

Table 2: Ridership and Cost of Low Ridership Routes

Route	From	To	Round Trip Distance (in km)	# Round Trips Provided Per Day	2015 Statistics for Route/Route Segment to be Discontinued		
					Average Daily Boardings on Segment to be Discontinued ²	Average Boardings/Trip on segment to be Discontinued	Cost per passenger on segment to be Discontinued ³
22	Ragged Lake Transit Centre	Exhibition Park	0.9	35	5	0.1	\$29.84
55	Craigburn Drive	Portobello Turning Loop	6	21	23	1.1	\$54.26
400	Kinsac Road	Beaver Bank Villa	14	12	12	1.0	\$66.32
401	Lakeview Shopping Centre	Seaforth Back Road ⁴	20	6	7	1.16	\$81.20
402	Ketch Harbour Road, Old Sambro Road		34	10	25	2.5	\$64.42

² Ridership based on 2015 manual passenger counting program, unless otherwise noted

³ Costs calculated based on length of trip and overall average speed.

⁴ Based on February 2016 counts

2.2 Principle 2: Build a Simplified Transfer Based Network.

A network design with increased reliance on transfers can simplify the network and make it easier for existing and potential transit riders to understand. It also can reduce the average length of routes in the network, which can improve service reliability.

Transfers work best at locations where a number of routes can connect with each other to accommodate travel made from a diverse set of passenger trip origins to a diverse set of passenger destinations. They are also commonly used to provide connections between low demand areas and high ridership services in major transportation corridors.

Where there is a high demand between one part of the network and a particular destination, on the other hand, a direct service without transfer offering “single seat” trips can be provided. Such services, for example downtown-oriented trips during weekday peak periods, are attractive to passengers and make efficient use of bus and driver resources.

The *Moving Forward Together Plan* strikes a balance by providing direct trips without transfers within major transportation corridors and to/from areas of high demand, and by employing transfer connections to accommodate more dispersed travel patterns and travel during periods of lower transit demand.

2.2.1 Achieving Principle 2: Building a Simplified Transfer Based Network

The *Moving Forward Together Plan* works toward building a simplified transfer based network in three key ways:

1. Facilitating Transfers: In order to meet the conditions of support for transfers identified through the first round of public consultation, the redesigned transit network is built on a model of having regular, frequent Corridor Routes along major transportation corridors that passengers can transfer onto to reach their destination. All Local Routes outlined in this plan travel to transit terminals that provide connections with Corridor Routes and provide weather-protected waiting facilities. As part of the plan, Express Routes and Regional Express Routes will stop at key transfer locations to facilitate connections with other routes.

During peak commuting periods when there is the highest demand on our road network, and on our transit service, Express Routes will exist to move large volumes of passengers to major employment areas without requiring transferring. However, Express Routes will stop at terminals and major destinations to allow passengers with different travel needs to transfer.

2. Making the Network Easier to Understand: Completing a comprehensive review and making network wide changes allows the opportunity to re-schedule service with more consistency. In some cases, routes have evolved over time to have uneven frequencies, and a variety of different routing patterns depending on the time of day. This plan proposes that routes have regular, more predictable frequencies, with less variation at different times of the day.

This plan also provides an opportunity to plan the network cohesively, with service types, levels of service, and route numbers and names that are applied consistently, but still recognizing the unique needs of different communities. Where variations of routes do exist, for clarity, letters will be used in addition to the route number.

Although many routes proposed in this plan resemble in part a route that existed previously, most have been simplified. The complexity of routes was reduced by straightening out circuitous routing where possible, eliminating one way service where possible, or removing portions of routes that did not have high ridership.

In addition, the number of routes that overlap has been reduced, particularly during the off-peak period. On major transportation corridors, rather than providing a large number of routes, Corridor Routes will be provided. These Corridor Routes will connect with Local Routes at terminals, so that passengers can transfer to reach their destination. The geography and road network in Halifax make it impossible to remove all overlap and redundant service while still providing a convenient transit trip, but a balance has been struck that greatly reduces the complexity of the system, and makes the network easier to understand.

3. Improving Passenger Amenities: This plan introduces a new classification system to measure and improve the level of amenities at bus stops and terminals, with the intention of creating safe, comfortable transfer locations throughout the network.

In addition, the planning process has identified the need for two new transit terminals to facilitate transferring: the first at Wrights Cove in Burnside, and the second in West Bedford.

2.3 Principle 3: Invest in Service Quality and Reliability

Investing in service quality and reliability means dedicating resources to maintain existing service in good condition by addressing schedule adherence issues and overloads on an ongoing basis, as opposed to prioritizing the introduction of new services.

Throughout all public consultation activities, participants consistently indicated that both the maintenance of existing service and the introduction of new service were important, although most agreed that in the short term, Halifax Transit should focus on improving the reliability of the existing service.

2.3.1 Achieving Principle 3: Investing in Service Quality and Reliability

The *Moving Forward Together Plan* invests in service quality and reliability in five key ways:

- 1. Addressing capacity, demand, frequency, and service span issues on existing routes:** As noted above, survey respondents wanted a larger percentage of resources spent on maintaining the quality of existing routes, rather than service increases. With the implementation of new Automatic Vehicle Location (AVL) and Automatic Passenger Count (APC) units on all Halifax Transit vehicles, more data will be available than ever before to improve the scheduling and resource allocation to ensure a higher quality of service on established routes.

The implementation of this plan focuses on phased restructuring of the existing transit network, prior to the provision of service in newly developing areas. Through the implementation period of this plan, each route will be scheduled using accurate running times obtained using the AVL data, in order to ensure high levels of reliability for passengers. Running times will be adjusted as needed in the future to accommodate for changes in traffic patterns and variations in running time.

- 2. Use Route Structures which Support Schedule Adherence and Shorter Travel Times:** This plan outlines a network which makes use of shorter Local Routes in suburban or rural areas, which are not

tied to service running towards the more congested urban centre. The exception to this is during peak hours, when some Local Routes become Express Routes, providing a direct trip into Downtown in order to carry passengers as directly and efficiently as possible. Where longer routes exist, this plan has streamlined service to eliminate portions of routes with lower ridership demand.

- 3. Balance Fleet Recapitalization and Fleet Expansion:** High quality of service, especially schedule adherence, depends on the availability of reliable transit vehicles. As the Halifax Transit fleet ages, it is important to continue to replace the oldest vehicles to ensure that they are safe and reliable for passengers.. Halifax Transit will gradually be moving from an 18 year replacement cycle for transit buses to a 14 year replacement cycle. Although this transition will take time and resources, this shorter lifecycle for vehicles reduces lifetime maintenance costs and allows Halifax Transit to provide customers with more reliable service. The plan acknowledges the need for the timely replacement of aging vehicles and service increases are based on the resources remaining only after all necessary replacement vehicles are accounted for.
- 4. Replace existing Regional Express (currently known as “MetroX”) vehicles with standard 40 foot vehicles:** The smaller vehicles currently in use on some MetroX routes do not provide the capacity required on some trips, and upon reaching their expected lifespan, they will be replaced by standard forty foot vehicles. Replacing the shorter Regional Express vehicles will increase capacity for passengers, and will also provide opportunities for scheduling efficiencies.
- 5. Apply Quality of Service Guidelines:** This plan includes a number of quality of service guidelines which Halifax Transit will strive to meet in order to improve the customer experience and the efficiency and reliability of the transit network.

2.4 Principle 4: Give Transit Increased Priority in the Transportation Network.

Making transit faster and more reliable is important to make transit attractive to new riders, to increase ridership, and to control operating costs. One of the best means to do this is by reducing the impact that traffic congestion and traffic signals have on transit vehicles.

Transit Priority Measures (TPMs) are tools that municipalities and transit agencies can use to reduce these delays, improve reliability and reduce the average travel time of transit vehicles. There are many different types of TPMs, and in many cases they are used together to create a city-wide network. Some of the most common TPMs include:

- Traffic Signal Priority
- Queue Jumps
- Bus lanes
- Transit corridors that are separated from traffic

Regional Plan Policy T-8 reads “Transit priority measures, such as designated transit lanes, transit signal priority, and queue jump lanes may be made to improve the reliability and travel time of public transit vehicles.”

Overall, public consultation indicated strong support for the implementation of TPMs, with both regular transit users and non-transit users agreeing that TPMs play a key role in increasing the reliability of transit, and in making it more attractive and user-friendly. However, many participants recognized that TPMs are not a “one size fits all” solution, and that each situation must be carefully considered to ensure that the right measure is implemented in the right location.

Today, Halifax Transit vehicles make use of a network of 17 TPMs throughout the city, many of which were introduced as part of MetroLink service in the 2005/2006 fiscal year.

2.4.1 Achieving Principle 4: Giving Transit Increased Priority in the Transportation Network

The *Moving Forward Together Plan* works to give transit increased priority in the transportation network in five key ways:

- 1. Supporting implementation of TPM projects in the short term:** A roster of possible TPMs was compiled and evaluated to determine their potential impact on all road users and payback period. Halifax Transit will work with other municipal departments to advance implementation of these measures.
- 2. Creating a comprehensive TPM plan:** A broad, comprehensive plan is required to inventory and prioritize all opportunities for TPMs in the new transit network. This plan should build on the short term plan currently being completed. This plan will establish a long term vision for TPMs in the Halifax Transit network.
- 3. Prioritizing TPMs in key corridors:** In the past, TPMs in the Halifax Transit network have largely been introduced on transportation corridors frequented by peak only Urban Express Routes or MetroLink routes. This focus will be shifted towards implementing TPMs for Corridor Routes, which carry many transit vehicles throughout the entire day. This will provide transit riders with a faster and

more reliable trip all day, not just at rush hour. In the future, the Corridor Routes proposed in this network could be candidates for Bus Rapid Transit (BRT) corridors. The potential for introducing higher order transit service such as BRT, light rail or new ferry routes are not considered as part of this plan, but will be explored through the Integrated Mobility Plan.

- 4. Seeking opportunities for low cost TPMs:** Not all TPMs are costly and require significant capital investment to build. In some cases it is possible to seize an opportunity presented by other municipal work, for example a road realignment. Halifax Transit staff will engage with the Transportation & Public Works and Planning & Development Municipal Business Units to identify potential opportunities to integrate the construction of TPMs into larger ongoing projects.
- 5. Modifying routes to take advantage of existing and future TPMs:** Within the Regional Centre, where TPMs are of highest value, narrow road rights-of-way are common and space is often unavailable for new infrastructure. In some cases it will be important to modify routes to travel on streets where priority measures are achievable rather than struggling to implement measures on routes that buses currently operate on. As TPMs are implemented, consideration must be given to the realignment of existing routes in order to provide as many routes as possible with the benefits provided by the faster and more reliable travel time.

Part 3: The Network



3 Transit Network Overview

The *Moving Forward Together Plan* includes a redesign of the transit route network. Many proposed routes resemble a route that existed prior to the plan, but almost all have been shortened, straightened out, or simplified, in alignment with the Moving Forward Principles. In addition, some new routes have been proposed, and some routes which currently exist have reduced service, or have been removed from the network map. The future network will be described in the following sections.

3.1 Service Types

This section describes each of the transit service types outlined in this network, including their purpose, span of service and service frequency guidelines.

The Halifax Transit network will consist of eight service types. In order to easily identify each route's service type, every service type will have a unique range of route numbers. This way, from the route number alone, the service type and thus service day and minimum frequencies can be inferred for a particular route.

The following lists all service types in the plan, and the route numbers assigned to each:

- Corridor Routes (Routes 1 - 19)
- Local Routes (Routes 20 – 99)
- Express Routes (Routes 100 through 199)
- Regional Express Routes (Route 300 – 399)
- Rural Routes (Route 400 – 499)
- Ferry Routes (Route 500- 599)
- School Routes (Route 700-799)
- Access-A-Bus

A detailed description of each service type is below.

3.2 Corridor Routes

3.2.1 Description of Corridor Routes

The purpose of Corridor Routes is to provide consistent, frequent, service on high demand corridors, connecting residential areas or retail districts with regional destinations like shopping, employment, schools, and services.

What differentiates Corridor Routes from other route types is the sustained demand for transit over the course of the day, late into the evenings, and on weekends. These routes are well positioned to support increased residential density along the corridors which will, in turn, will support increases in potential ridership generated by adjacent land uses.

3.2.3 Level of Service Guidelines

Corridor Routes will strive to meet or exceed the following guidelines, subject to resource availability:

Table 3: Level of Service Guidelines for Corridor Routes

Corridor Routes	
Peak Headway (peak direction)	5-15 min
Off Peak Headway	10-30 min
Saturday Headway	15-30 min
Sunday Headway	15-30 min
Weekday Span of Service	6am – 1am
Saturday Span of Service	6am – 12am
Sunday Span of Service	6am – 12am

3.2.4 Introducing Corridor Routes

An existing route will be considered for classification as a Corridor Route if it meets the following criteria:

- Ridership is sustained over the course of the year
- Ridership in all directions is moderately high all day
- The route consistently exceeds performance guidelines
- The route serves a different purpose or is sufficiently separated from other Corridor Routes
- Adjacent land uses are supportive of frequent, all day transit service (density, mix of land use types).

3.2.5 Corridor Routes Included in this Plan

- 1 Spring Garden
- 2 Clayton Park - Downtown
- 3 Crosstown
- 4 Lacewood - Universities
- 5 Portland
- 6 Eastern Passage
- 7 Peninsula
- 8 Sackville
- 9 Herring Cove
- 10 Mic Mac

3.3 Local Routes

3.3.1 Description of Local Routes

The purpose of Local Routes is to connect neighbourhoods and communities to one another, and to the higher frequency Corridor Routes at transit terminals. Local Routes generally operate at a lower frequency than Corridor Routes, but service provision is dependent on observed ridership, and service requirements as outlined in this plan.

3.3.2 Level of Service Guidelines

Local Routes will strive to meet or exceed the following guidelines, subject to resource availability:

Table 4: Level of Service Guidelines for Local Routes

Local Routes	
Peak Headway	15-30min
Off Peak Headway	30-60 min
Saturday Headway	30-60 min
Sunday Headway	30-60 min
Weekday Span of Service	6am – 11pm
Saturday Span of Service	7am – 11pm
Sunday Span of Service	8am – 11pm

3.3.3 Limited-Service Local Routes

It is important to note that some Local Routes may provide levels of service which do not meet the guidelines outlined above as they exist to meet a particular demand which only exists at a specific time of day. For example the Route 50 Dockyard provides service between the Bridge Terminal and HMC Dockyard during AM and PM peak periods only. In addition, a few Local Routes with low ridership operate during peak periods only.

Furthermore, some Local Routes are replaced by Express Routes during weekday peak hours in order to provide local service as well as a direct trip in and out of Downtown Halifax. When this occurs, local service is still provided, but instead of ending at the local terminal, the route will then provide a limited stop service into Downtown in AM peak. In PM peak, the Express Route will provide limited stop service from Downtown, and then resume local service upon reaching the destination terminal.

3.3.4 Introducing Local Routes

The introduction of a Local Route will depend on the projected ridership of the new service based on adjacent residential and employment density, proximity to other transit routes, adjacent land uses (mixture of uses), pedestrian and active transportation connectivity, and the directness of road networks.

3.3.5 Local Routes Included in this Plan

The following list identifies all Local Routes included in this plan. Routes whose names are followed by an asterisk are replaced by an Express Route in the AM and PM peak, providing residents along these routes with single-seat, express trips into downtown Halifax. Corresponding Express Routes can be identified as they will have the same route name, and a similar route number. For example, in peak periods, the Route 82 First Lake will be replaced by the Route 182 First Lake Express. In some areas, Local Routes run all day and are complemented by Express Routes at peak, rather than being replaced by them. Limited-Service Local Routes are also described below, with limitations on service denoted in parenthesis.

21	Timberlea
22	Armdale
24	Leiblin Park
25	Governors Brook
26	Springvale (peak only)
29	Barrington
31	Bayers Lake
32	Flamingo
34	Parkland – Dunbrack
50	Dockyard (peak only)
51	Windmill
53	Highfield
54	Montebello
55	Port Wallace
56	Dartmouth Crossing
57	Portland Estates (peak only)
58	Woodlawn*
59	Colby*
61	Cherry Brook*
62	Grahams Grove
63	Mount Edward
64	Burnside (weekday only)
65	Caldwell*
67	Baker
68	North Preston*
72	Portland Hills - Dartmouth Crossing
82	First Lake*
83	Springfield*
84	Glendale
85	Millwood*
87	Sackville – Dartmouth
88	Bedford Common
89	Beaver Bank*
90	Larry Uteck
91	Hemlock Ravine
93	Bedford Highway (peak only)

3.4 Express Routes

3.4.1 Description of Express Routes

Express Routes, as they appear in this plan, are a hybrid of the successful MetroLink and Urban Express services familiar to the region. These are designed to provide commuters with a high quality, limited stop transit service during peak hour periods, making transit more attractive to individuals currently commuting for work and education during weekday peak periods.

Similar to the former Urban Express Routes, new Express Routes will provide local service in residential areas (making regular local stops for pickups and drop offs). In some cases Express Routes will actually replicate and replace Local Routes during AM and PM peak. Once the route departs the local area, similar to MetroLink service, it will provide express (limited stop) service into Downtown. In addition to servicing transit terminals, express routes may also service one or two major destinations on the way to downtown Halifax, such as HMC Dockyard. A major destination could include a regional shopping centre, large employer (more than 2,500 jobs), large universities or hospitals, or other regional attractions. Upon arrival in Downtown Halifax more frequent stops will resume, allowing users to access their destinations quickly and easily. Because of the volume of Express Routes travelling through Downtown Halifax during peak periods, Express Routes will follow one of two potential routings.

The intent of this revised Express model is to attract peak period commuters to transit and to reduce dependence on the existing Park & Ride facilities, which are extremely costly to build and maintain. Express service will pick up more passengers near their home so it is no longer necessary to get into a vehicle in order to access transit service. The new Express Route services will also still provide a high level of service at transit terminals, allowing those who continue to choose to Park & Ride to retain a similar, if not better, level of service as existed prior to this plan.

3.4.2 Level of Service Guidelines

Express Routes have no standard frequencies or spans of service. They operate during peak hours Monday to Friday only, and the number of trips provided will vary based on demand. Some Express Routes provide a high level of service during the entire peak period, and others have a limited number of trips concentrated around a certain time. Express Routes provide service in the peak direction only (i.e. towards Downtown during AM peak and out from Downtown during the PM peak). Due to the unique nature of commuting trips, Express Routes don't always need a consistent time interval between successive buses, and in some cases could actually benefit from a cluster of trips to arrive at a destination for the start of the work day, in some cases less than five minutes apart.

3.4.3 Introducing Express Routes

Express Routes may be considered when the following additional conditions are met:

- If the introduction of an Express Route will reduce the need for a transfer for a common commuting trip pattern (i.e. it can be shown that a high volume of individuals from one neighbourhood work in the same employment district);
- The travel time between the start and the end of the route is more than 30 minutes;
- The Express Route can provide a noticeably shorter trip than local bus service; and
- It is expected that the trip would carry a full seated load upon reaching the Regional Centre.

Express Routes may also be considered as introductory service in an area otherwise unserved by local transit, particularly in a primarily residential area with a low diversity of land uses where it is anticipated that transit demand will be focused in the morning and afternoon peak periods. The above conditions would still need to be met.

A new Express Route may be introduced with as few as two trips during each weekday peak period. Additional trips may be considered if ridership grows.

3.4.4 Express Routes Included in this Plan

The following list identifies all Express Routes included in this plan. Routes whose names are followed by an asterisk replace a Local Route in the AM and PM peak.

- 123 Timberlea Express
- 127 Cowie Hill Express
- 135 Flamingo Express
- 136 Farnham Express
- 137 Regency Park Express
- 138 Parkland Express
- 158 Woodlawn Express*
- 159 Colby Express*
- 161 Auburn / Cherry Brook Express*
- 165 Caldwell Express*
- 168 North Preston Express*
- 178 Cole Harbour to Woodside Ferry Express
- 179 Mount Edward to Woodside Ferry Express
- 182 First Lake Express*
- 183 Springfield Express*
- 185 Millwood Express*
- 186 Basinview Express
- 189 Beaver Bank Express*
- 192 Southgate Express
- 194 Bedford West Express
- 196 Starboard Express

3.5 Regional Express Routes

3.5.1 Description of Regional Express Routes

Regional Express Routes connect rural, outlying communities to the Regional Centre and other transit services. The intent of Regional Express service is to allow residents of outlying communities the option of using transit for regular commuting. Regional Express Routes will be subject to a premium fare. Currently, the cost per ride for these services is \$3.50 per person, \$1.00 higher than the fare for other service types.

The Regional Express service model is very similar to the MetroX service which it will supersede; however, the new format will potentially allow one to three additional stops between the start and end of the route, providing more flexibility for passengers. Any additional stops added to a Regional Express route must occur inside the Urban Transit Service Boundary and not delay the trip beyond the existing schedule.

3.5.2 Level of Service Guidelines

Regional Express Routes will strive to meet the following guidelines, subject to resource availability:

Table 5: Level of Service Guidelines for Regional Express Routes

Regional Express Routes	
Peak Headway (peak direction)	10-30 min
Off Peak Headway	One midday trip, one evening trip
Saturday Headway	No Service
Sunday Headway	No Service
Weekday Span of Service	As needed according to demand
Weekend Span of Service	No Service

Regional Express Routes are commuter focused, and the service is primarily in the peak direction. In addition to peak service, there is one midday trip and one early evening trip. The number of trips provided at peak is based on observed demand for service. These routes do not operate on weekends, with the exception of the 320 Airport/ Fall River Regional Express which is discussed below.

3.5.3 Introduction of a new Regional Express Route

The Regional Municipal Planning Strategy limits the introduction of new Regional Express services to areas identified in the Regional Plan as Rural District Growth Centres. As a result, only one future Regional Express Route is proposed: the Route 310 Middle Sackville Regional Express between Margeson Drive in Middle Sackville, and Downtown Halifax.

3.5.4 Regional Express Routes included in this Plan

- 310 Middle Sackville Regional Express
- 320 Airport / Fall River Regional Express
- 330 Tantallon/Sheldrake Lake Regional Express
- 370 Porters Lake Regional Express

3.5.5 Route 320 Airport/Fall River Regional Express Route

This Regional Express Routes provides a connection between Downtown Halifax and the Halifax Stanfield International Airport. Due to the regional importance of the route from a tourism and economic

development perspective, and the desire for integrated mobility, this route is an exception to the guidelines listed above. The Route 320 provides a significantly higher level of service than other Regional Express Routes, operating consistently all day, seven days a week in both inbound and outbound directions. In addition, this route will not be held to the same ridership guidelines and performance expectations as other routes.

In order to reflect the reduced ridership expectations, longer service days, and higher level of service, as well as the significant cost to operate this important service, the cash/single trip fare for the Route 320 should be higher than that of other Halifax Transit services. Tickets and passes are to remain the same price as those for other Regional Express Routes. The purpose is not to penalize commuters or frequent travellers, but to establish a cash fare that is more reflective of the value of the service to occasional travellers.



Figure 6: Route 320 Airport/Fall River

3.6 Ferry

3.6.1 Description of Ferry Routes

Halifax Harbour is the second largest ice-free harbour in the world. There are currently two Ferry Routes, Alderney and Woodside. The Alderney Ferry Service operates seven days a week, between Downtown Dartmouth and Downtown Halifax. The Woodside Ferry Service operates between Halifax and the Woodside Ferry Terminal on weekdays only.

All three Ferry Terminals are integrated with the bus network and connect with the active transportation and trails networks. Both the Alderney and Woodside Terminals also feature Park & Ride facilities.

3.6.2 Level of Service Guidelines

Additional resources were made available to accommodate increases in ferry service during the Macdonald Bridge closures associated with *The Big Lift* project in 2015/2016. Following the completion of these closures, ridership analysis will be undertaken to determine if the additional ferry service should be retained or modified.

Ferry Routes will strive to meet the following guidelines, subject to ridership demand and resource availability. It is worthy of note that the Alderney Ferry route exceeds the minimum guidelines outlined below:

Table 6: Level of Service Guidelines for Ferry Routes

Ferry Routes	
Peak Headway (peak direction)	15-30 min
Off Peak Headway	15-30 min
Saturday Headway	No Service
Sunday Headway	No Service
Weekday Span of Service	6am – 11pm
Weekend Span of Service	No Service

3.6.3 Ferry Routes Included in this Plan

Two ferry routes are included in this Plan. They are:

501 Alderney

502 Woodside

3.7 Rural Routes

3.7.1 Description of Rural Routes

Rural Routes are those which serve to provide transit service to communities outside of the Urban Transit Service Boundary (UTSB) and were established before the boundary was adopted. These routes provide connections between rural communities and transit service in the urban area, by bringing passengers to the nearest transit terminal.

3.7.2 Level of Service Guidelines

There are no service spans or frequency guidelines for Rural Routes, due to the adoption of the UTSB which limits the amount of service available outside the boundary to that which currently exists. Therefore, no additional service will be introduced outside of the UTSB. As with any public transit routes or services, any service reductions will be based upon approved performance standards.

3.7.3 Introducing Rural Routes

No new Rural Routes will be introduced due to the limits in place under the UTSB and the Regional Plan. Routes which currently operate outside the boundary can be modified, however, if there is no overall increase in service as measured by in-service kilometers or budgeted service hours.

As noted at the outset of this plan, Policy T-10 of the Regional Plan states that Council may consider programs to encourage and assist communities with developing their own community based transit services in the areas outside the UTSB. At time of writing, Halifax Transit supports the operation of two community transit service providers in Halifax's rural communities through the Rural Transit Funding Program.

3.7.4 Rural Routes Included in this Plan

- 401 Porters Lake
- 415 Purcells Cove (peak only)
- 433 Tantallon (peak only)

3.7.5 Route 400 Beaver Bank

The changes outlined in this plan for transit service to Beaver Bank result in the reclassification of the former Route 400 Beaver Bank as a Local Route (Route 89 Beaver Bank). This is a result of the truncation of the route to eliminate the low ridership segment beyond Kinsac Road. Because the route is almost entirely contained within the UTSB, it is considered a Local Route in this plan, and will have a higher level of service than the former Route 400 Beaver Bank.

3.8 School Routes

3.8.1 Description of School Routes

Regular Halifax Transit service is often used by school aged children to travel to and from school. In some specific cases in the past, Halifax Transit has introduced modified transit routing to better meet the needs of students, or provided an additional trip on an existing route that is aligned with school arrival and departure times. These customized services, called “School Specials” were not published in the public schedules as they were available only to students. The majority of the previous school routes have become redundant, and have not evolved to meet the changing needs of schools or the growth in the transit network. Few are well used, and the bulk of these services would be eliminated through the *Moving Forward Together Plan*. Those which will be retained have established ridership, provide needed capacity to a particular neighbourhood, and provide a service which is not duplicated by another transit route.

As they are designed to meet the requirements of the academic calendar, School Routes only operate from September until the end of June of each year. They do not operate on statutory holidays, school holidays, or during the summer months. Regular fares apply on all School Routes, and any paying customer is welcome to board, students or otherwise.

3.8.2 Level of Service Guidelines

Typically, a School Route has only one or two one way trips per day, intended to accommodate the arrival of students, or the departure of students.

3.8.3 Introducing School Routes

The introduction of new School Routes will not be considered in the future and over the life of this Plan. However, subject to resource availability and impact to public schedules, Halifax Transit will consider scheduling additional trips or adjusting the schedule of trips on nearby transit routes at school arrival and departure times to allow students to make use of transit.

3.8.4 School Routes Included in this Plan

701 Halifax West

726 Citadel

735 Clayton Park

3.9 Access-a-Bus

3.9.1 Description of Access-a-Bus Services

Halifax Transit's Access-A-Bus service is a shared ride, door-to-door, transit service for persons who are unable to use the conventional transit system due to physical or cognitive disabilities and are declared eligible through a registration process. Those eligible for Access-A-Bus services must be picked up and dropped off within one kilometer of a fixed transit route. The Access-A-Bus service is meant to supplement the Halifax Transit fixed route system.

3.9.2 Level of Service Guidelines

Access-A-Bus clients must book rides at least 24 hours ahead of a planned trip. Trip requests received after the 24 hour booking window will be placed on a waiting list, on a first-come, first-served basis and filled as vacancies become available. Access-A-Bus passengers are provided a 30-minute pick up window at the time of trip confirmation. This window allows for more scheduling flexibility due to unexpected traffic delays or detours, and to allow Halifax Transit to make more bookings.

3.9.3 Ridership Expectations

Access-A-Bus Service is not intended to be a high ridership service, but is available as a service for members of the community who are unable to make use of conventional transit service, and who meet the eligibility criteria. As a result, there is no ridership guideline for this service.

Part 4: Geographic Areas



4 Network Overview

This section describes the transit network in detail, broken down by geographic area and by service type, listing each route which serves those looking to travel to, from, and through a particular area.

4.1 Regional Centre

The Regional Centre is the urban core of the Halifax Regional Municipality, and is composed of the Halifax Peninsula and Dartmouth within the Circumferential Highway. With a total land area of over 33 square kilometres, the Regional Centre is the focus of commerce, business, government, health care, post-secondary education, and cultural and entertainment sectors for not only the Halifax Regional Municipality, but for the entire Atlantic Region.

As there is large transit demand to and throughout the Regional Centre over the course of the day and on evenings and weekends, this area is serviced by a large volume of transit service, including all ten Corridor Routes, 24 Local Routes, 19 Express Routes, and two Ferry Routes.

Corridor Routes Serving the Regional Centre

The Regional Centre is served by all ten Corridor Routes:

- | | |
|---------------------------|-------------------|
| 1 Spring Garden | 6 Eastern Passage |
| 2 Clayton Park - Downtown | 7 Peninsula |
| 3 Crosstown | 8 Sackville |
| 4 Lacewood - Universities | 9 Herring Cove |
| 5 Portland | 10 Mic Mac |

These Corridor Routes provide a high level of service all day along major streets including Alderney Drive, Portland Street, Victoria Road, Albro Lake Road, Wyse Road, Gottingen Street, Robie Street, Quinpool Road, Windsor Street, Oxford Street, Spring Garden Road, Chebucto Road, North Street, Barrington Street, South Street, South Park Street, and Inglis Street. They provide direct connections to all of the terminals in the Halifax Transit network.

Local Routes Serving the Halifax Peninsula

The Peninsula is served by 10 Local Routes:

- | | |
|---------------------------|--------------------------------|
| 24 Leiblin Park | 50 Dockyard (peak only) |
| 25 Governors Brook | 84 Glendale |
| 26 Springvale (peak only) | 90 Larry Uteck |
| 29 Barrington | 91 Hemlock Ravine |
| 31 Bayers Lake | 93 Bedford Highway (peak only) |

These routes provide regular, all day circulation amongst neighbourhoods on the Peninsula, and connect to communities such as Sackville, Mainland South, Bedford, Dartmouth, and Bayers Lake Business Park.

Local Routes Serving Dartmouth

Dartmouth within the Circumferential Highway is served by the following 15 Local Routes:

32 Flamingo	58 Woodlawn
50 Dockyard (peak only)	62 Grahams Grove
51 Windmill	63 Mount Edward
53 Highfield – Bridge	64 Burnside (weekday only)
54 Montebello	67 Baker
55 Port Wallace	72 Portland Hills–Dartmouth Crossing
56 Dartmouth Crossing	87 Sackville - Dartmouth
57 Russell Lake (peak only)	

These routes provide direct connections to major employers and regional destinations including Burnside and Dartmouth Crossing, the Woodside Ferry Terminal, Sackville, Clayton Park, and communities within the Regional Centre.

Express Routes

Downtown Halifax is the convergence of most peak-focused services. As a result, there are 19 Express Routes that bring passengers from other parts of the municipality to the downtown during peak commuting periods. These Express Routes are:

123 Timberlea Express	165 Caldwell Express
127 Cowie Hill Express	168 North Preston Express
135 Flamingo Express	182 First Lake Express
136 Farnham Gate Express	183 Springfield Express
137 Regency Park Express	185 Millwood Express
138 Parkland Express	186 Basinview Express
158 Woodlawn Express	189 Beaver Bank Express
159 Colby Express	192 Southgate Express
161A Cherry Brook Express	194 Bedford West Express
161B Auburn Express	196 Starboard Express

These routes provide direct connections to/from many residential neighbourhoods outside of the Regional Centre and provide local drop offs and pickups at regional destinations including large employers, shopping destinations, major terminals and medical centres.

Ferry Routes

The Regional Centre is served by two Ferry Routes

501 Alderney Ferry

502 Woodside Ferry

These Ferry Routes provide direct access from the Halifax Ferry Terminal in Downtown Halifax to Downtown Dartmouth via the Alderney Ferry Terminal, and to Woodside via the Woodside Ferry Terminal.

4.2 Mainland South

Mainland South includes the communities of Armdale, Spryfield, and Herring Cove, and is serviced by one Corridor Route, four Local Routes, one Express Route, and one Rural Route..

Corridor Routes

Mainland South is served by the following Corridor Route:

9 Herring Cove

This Corridor Route provides all day, frequent service along the Herring Cove Road corridor, providing a direct connection to downtown Halifax via Mumford Terminal and Quinpool Road.

Local Routes

Mainland South is served by four Local Routes:

22 Armdale

24 Leiblin Park

25 Governors Brook

26 Springvale (peak only)

The Routes 22, 24 and 25 provide regular, all day circulation amongst area neighbourhoods, and take users to local destinations such as Spryfield Shopping Centre (formerly known as the South Centre Mall), and regional destinations such as universities and hospitals. The Route 26 is a peak-only route that connects the community of Springvale with the Mumford Terminal, where passengers can transfer to/from other routes to reach their destination.

Express Routes

Mainland South is served by one Express Route:

127 Cowie Hill Express

This route provides an express connection to Downtown Halifax and the hospitals during peak periods.

Rural Routes

Mainland South is served by one Rural Route:

415 Purcells Cove

This route provides peak only service from Purcells Cove and Fergusons Cove to Mumford Terminal and Bayers Road.

4.3 Mainland North

Mainland North, including the communities of Fairview, Clayton Park, Bayers Lake, Beechville, Lakeside, and Timberlea, will be serviced by four Corridor Routes, seven Local Routes, and five Express Routes.

Corridor Routes

Mainland North is served by four Corridor Routes:

2 Clayton Park - Downtown
3 Crosstown

4 Lacewood - Universities
8 Sackville

These Corridor Routes are intended to provide all day service along the Bedford Highway, Lacewood Drive, Willet Street, Main Avenue, Joseph Howe Drive and Bayers Road. They provide direct connections to most Halifax Transit terminals as well as Downtown Halifax. Two travel into Downtown servicing Scotia Square and Water Street Terminal, one travels to Dalhousie and one travels across the MacDonald Bridge to the Bridge Terminal and beyond to Highfield Terminal and Burnside.

Local Routes

Mainland North is served by seven Local Routes:

21 Timberlea
31 Bayers Lake
32 Flamingo
34 Parkland - Dunbrack

90 Larry Uteck
91 Hemlock Ravine
93 Bedford Highway (peak only)

These routes provide regular, all day circulation within Mainland North, and connections to local amenities, adjacent communities and regional destinations including the Halifax Shopping Centre. The Route 93 provides peak only local service into Downtown Halifax.

Express Routes

Mainland North is served by five Express Routes:

123 Timberlea Express
135 Flamingo Express
136 Farnham Gate Express

137 Regency Park Express
138 Parkland Express

These Express Routes provide an express connection to Downtown Halifax and the hospitals during peak periods.

4.4 Bedford

Bedford is served by one Corridor Route, four Local Routes, and four Express Routes.

Corridor Routes

The community of Bedford is served by one Corridor Route:

8 Sackville

This Corridor Route provides regular all day service along the Bedford Highway, connecting Downtown Halifax with Sackville and Bedford.

Local Routes

Bedford is served by four Local Routes:

87 Dartmouth
90 Larry Uteck

91 Hemlock Ravine
93 Bedford Highway (peak only)

These Local Routes provide direct connections to Mumford Terminal, Sackville, Burnside, Dartmouth, and Hammonds Plains Road. They also allow opportunities for transfers at Sackville Terminal, Wrights Cove Terminal, Bridge Terminal, Highfield Terminal, and Mumford Terminal. The Route 93 provides peak only local service into Downtown Halifax.

Express Routes

Bedford is served by five Express Routes:

182 First Lake Express
186 Basinview Express
192 Southgate Express

194 Bedford West Express
196 Starboard Express

All five Express Routes provide direct, express, peak hour service to Downtown Halifax. Routes 186, 192, 194, and 196 provide express service originating in Bedford and travelling directly into Halifax, whereas the Route 182 originates in Sackville, provides service along the Bedford Highway and Dartmouth Road, and expresses via Magazine Hill, and the MacKay Bridge to Halifax.

4.5 Sackville

Sackville is served by one Corridor Route, seven Local Routes and four Express Routes.

Corridor Routes

The community of Sackville is served by one Corridor Route:

8 Sackville

This Corridor Route provides regular all day service along Sackville Drive, connecting Sackville with the Bedford Highway and Downtown Halifax..

Local Routes

Sackville is served by seven Local Routes. Those marked with an asterisk are replaced by Express Routes during peak periods in order to provide express service into and out of Downtown Halifax:

82 First Lake*
83 Springfield*
84 Glendale
85 Millwood*
87 Dartmouth
88 Bedford Common
89 Beaver Bank^{5*}

These Local Routes provide direct connections to/from Halifax, Dartmouth, Bedford Commons, and the communities of Springfield Lake, Millwood, and Beaver Bank. They also allow opportunities for transfers at Cobequid Terminal, Sackville Terminal, Wrights Cove Terminal, Highfield Terminal, and Bridge Terminal.

Express Routes

Sackville is served by four Express Routes, which replace routes 82 First Lake, 83 Springfield, 85 Millwood, and 89 Beaver Bank during peak periods:

182 First Lake Express
183 Springfield Express
185 Millwood Express
189 Beaver Bank Express

These four routes provide an express connection to Downtown Halifax and the hospitals during peak periods.

⁵ This route will continue provide two trips to Monarch Public School (one in the morning and one in the afternoon). It will no longer travel into the Woodbine Mobile Home Park.

4.6 Burnside & Dartmouth Crossing

Burnside and Dartmouth Crossing are served by one Corridor Route, six Local Routes, and four Express Routes:

Corridor Routes

Burnside Business Park is served by one Corridor Route:

3 Crosstown

This Corridor Route provides regular all day service from Lacewood Terminal through Mumford, Bridge and Highfield Terminals before entering the Burnside Business Park and terminating at the new Wrights Cove Terminal.

Local Routes

Burnside and Dartmouth Crossing are served by the following six Local Routes

51 Windmill (peak only)
56 Dartmouth Crossing
64 Burnside

72 Dartmouth Crosstown
84 Glendale
87 Sackville - Dartmouth

These Local Routes provide direct connections to the Bridge Terminal, Mic Mac Terminal, Highfield Terminal, and Wrights Cove Terminal as well as the communities of Sackville, North Dartmouth, Crichton Park, and Cole Harbour. Additionally, the Route 51 Windmill provides a peak period extension to Wrights Cove Terminal.

Express Routes

Wrights Cove Terminal is served by the following routes during peak periods. It is important to note that while none of these routes will circulate through Burnside, they will all service the Wrights Cove Terminal, stopping either in the terminal, or at a stop along Windmill Road, allowing passengers to transfer to or from a Local or Corridor route:

182 First Lake Express
183 Springfield Express

185 Millwood Express
189 Beaver Bank

4.7 Dartmouth, Woodside, Woodlawn, Eastern Passage, Cole Harbour, Cherry Brook, Lake Loon, Westphal, and North Preston

The communities outside of the Circumferential Highway in Dartmouth, including Dartmouth, Woodlawn, Woodside, Eastern Passage, Cole Harbour, Cherry Brook, Lake Loon, Westphal, and North Preston are served by three Corridor Routes, 11 Local Routes, seven Express Routes, and one Ferry Route.

Corridor Routes

This area is served by three Corridor Routes

5 Portland
6 Woodside

10 Micmac

Corridor Routes provide regular all day connections between Dartmouth and, the Halifax Peninsula, Cole Harbour, Woodside, and Eastern Passage.

Local Routes

These communities are served by the following 11 Local Routes. Those marked with an asterisk are replaced by Express Routes during peak periods in order to provide express service into and out of Downtown Halifax:

54 Montebello
55 Port Wallace
57 Russell Lake (peak only)
58 Woodlawn*
59 Colby*
61 Cherry Brook*

63 Mount Edward
65 Caldwell*
67 Baker
68 North Preston*
72 Portland Hills–Dartmouth Crossing

These routes provide circulation within the communities they serve, and make connections at major terminals such as Mic Mac Terminal, Woodside Ferry Terminal, Highfield Terminal, Penhorn Terminal, and Portland Hills Terminal.

Express Routes

Cole Harbour, Woodlawn, North Preston, and Cherry Brook are served by five Express Routes into Downtown Halifax. They are:

158 Woodlawn Express
159 Colby Express
161 Cherry Brook/Auburn Express

165 Caldwell Express
168 North Preston Express

These Express Routes replace Local Routes 58 Woodlawn, 59 Colby, 61 Cherry Brook, 65 Caldwell, and 68 North Preston respectively during peak periods, providing direct service to and from Downtown Halifax.

Two additional Express Routes also operate in Cole Harbour. These are:

178 Mount Edward to Ferry Express

179 Cole Harbour to Ferry Express

These routes provide an express connection to the Woodside Ferry Terminal during peak periods.

Ferry Routes

Woodside is served by one Ferry Route:

502 Woodside Ferry

This Ferry Route provides a direct connection to Downtown Halifax via the Halifax Ferry Terminal.



Figure 7: Alderney Ferry Terminal

4.8 Service outside the Urban Transit Service Boundary

Porters Lake, Lake Echo & East Preston

The communities of Porters Lake, Lake Echo, and East Preston will be served by one Rural Route and one Regional Express:

401 Porters Lake

370 Porters Lake Regional Express

Rural Route 401 Porters Lake provides service from the Porters Lake Park & Ride and Lakeview Shopping Centre to the Portland Hills Terminal on weekdays only.

The Route 370 Porters Lake Regional Express provides limited stop commuter service between the Porters Lake Park & Ride and Downtown Halifax. It will not provide service to Lake Echo or East Preston.

Purcells Cove & Fergusons Cove

The communities of Fergusons Cove and Purcells Cove will be served by one Rural Route:

415 Purcells Cove

This route provides service between the Bayers Road Terminal, Mumford Terminal, and York Redoubt via Purcells Cove Road. This route will provide weekday peak only service.

Tantallon/Sheldrake Lake

The community of Tantallon will be served by one Rural Route and one Regional Express:

433 Tantallon

330 Tantallon/ Sheldrake Lake Regional Express

The Rural Route 433 Tantallon will provide a peak only, weekday service between Tantallon and Lacewood Terminal, making local stops along Hammonds Plains Road, Bluewater Road, and Kearney Lake Road.

The Route 330 Tantallon/Sheldrake Lake Regional Express provides limited stop commuter service between the Tantallon Park & Ride, Sheldrake Lake Park & Ride and Downtown Halifax.

Fall River/Airport

Fall River and the Halifax Stanfield International Airport are serviced by one Regional Express:

320 Airport/Fall River Regional Express

This route provides all day service, seven days per week. The route 320 Airport/Fall River Regional Express provides limited stop service between Downtown Halifax, Dartmouth, and the Aerotech Business

Park. Between the Aerotech Business Park and Halifax Stanfield International Airport, several local stops are also serviced to provide connections for Business Park employees.

Middle Sackville

The portion of Middle Sackville outside of the Urban Transit Service Boundary is served by one Local Route, one Express Route, and one Regional Express.

83 Springfield
183 Springfield Express

310 Middle Sackville Regional Express

The Route 83 Springfield will provide local service seven days a week, connecting Springfield Avenue to Sackville Terminal via Sackville Drive, Margeson Drive, Hanwell Dive, Melham Drive, and Old Sackville Road. The Route 183 Springfield Express replaces the Route 83 at rush hour, providing limited stop service from Sackville Terminal to Downtown Halifax.

The Route 310 Middle Sackville Regional Express will serve a Park & Ride lot to be built off of Margeson Drive near Highway 101, Exit 2A. This route will provide a limited stop, commuter focused service.

Part 5: Transit Infrastructure



5 Transit Facilities

Transit facilities range from bus stops to terminals and are the interface between public transit and transit users. It is important that they have a strong presence in the urban landscape, offer safe, convenient and visible pedestrian links to nearby jobs, retail and housing, and make a positive impression on both current and potential transit users. To accommodate transfer connections within the new network, high quality facilities that provide weather-protection to waiting passengers, route and schedule information, convenient pedestrian and cycling access, and safe bus operations are required.

In recent years, there has been substantial investment in improving the customer experience at transit facilities, including the Bridge Terminal, Highfield Terminal, Alderney Ferry Terminal, and Lacewood Terminal. This will continue into the future as improvements will be made to make transit more accessible, attractive, comfortable and easy to use.

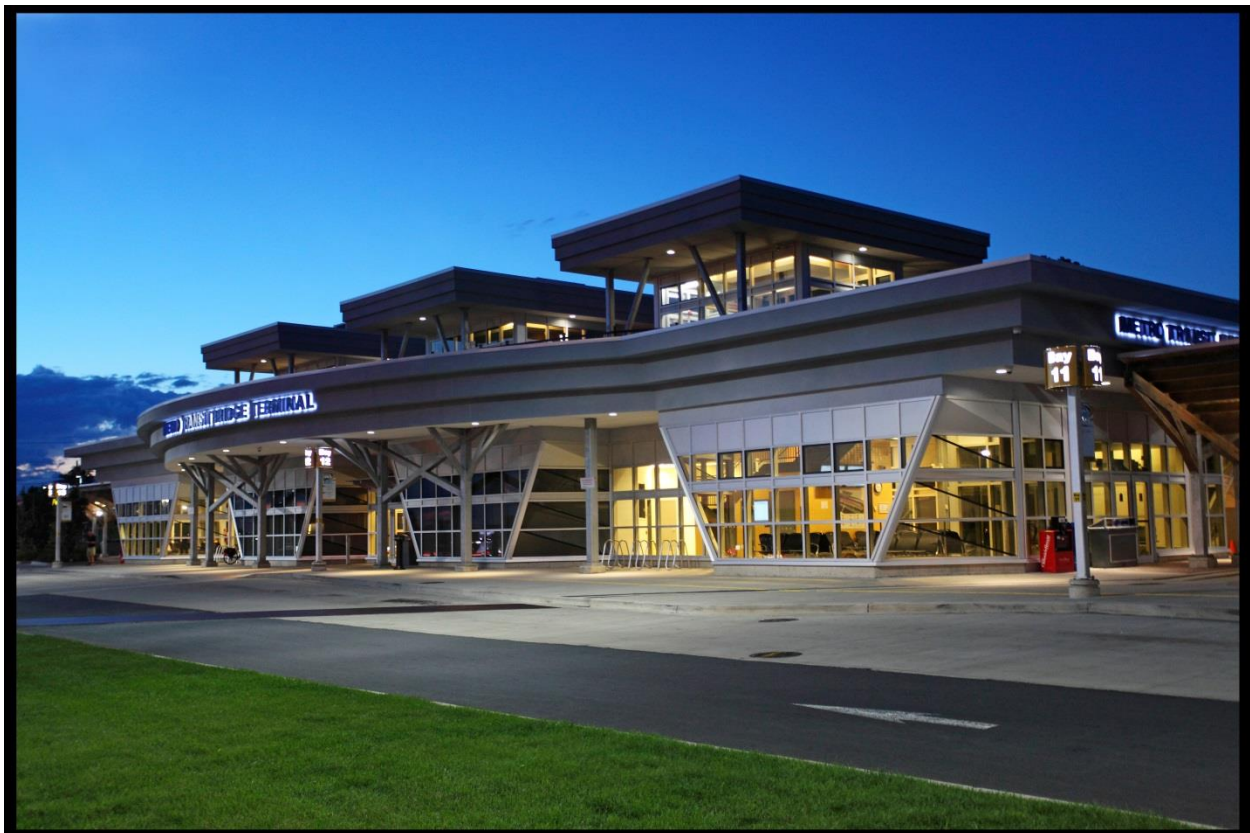


Figure 8: Bridge Terminal

5.1 Passenger Amenity Classifications

There are over 2500 locations in Halifax where passengers access transit service, some of which average over 2,000 boardings a day, some with fewer than 10. The following guidelines outline the level of passenger amenities which may be provided at these locations based on the number of passengers using the facility, the number of routes servicing the stop, and environmental conditions.

5.1.1 Level 1: Regular Bus Stop

Basic bus stop amenities are found at all locations where passengers can board or exit a transit vehicle. These bus stops can be served by any number of routes, and all bus stops are marked by a bus stop sign with route information and a phone number to access scheduling or real time trip departure information.



Figure 9: Bus Stop Flag Sign

5.1.2 Level 2: Sheltered Stop

In addition to a marked bus stop, these locations include a concrete landing pad to facilitate passenger boarding and alightings, and a shelter. A regular bus stop is a candidate to have a shelter installed if there are more than 100 passenger boardings per day. Shelters may be considered in some circumstances with lower volumes (i.e. stops with 50 – 99 boardings per day), such as when the stop is adjacent to a seniors' manor or community centre, or if environmental conditions warrant a passenger shelter (i.e. the stop is located in a particularly exposed or windy location). Due to maintenance contracts, resource availability, and space constraints, not all stops which meet these criteria will receive shelters.

5.1.3 Level 3: Enhanced Stop

Enhanced bus stops are typically found at major destinations and/or a transfer location for a large volume of passengers. This classification represents a new level of investment in bus stops for Halifax Transit,



Figure 10: Example of Enhanced Stop

meant to facilitate the transfers required to complete a trip in the transit network. A bus stop is a candidate to become an enhanced bus stop if there are more than 250 boardings per day, and the stop is serviced by at least two routes and/or is located at a regional destination or intermodal transportation hub. Bus stops will be upgraded to enhanced bus stops based on resource availability.

shows one example of an Enhanced Stop layout, featuring a shelter, route maps and schedule information, seating, and a garbage receptacle.

The amenities at each enhanced bus stop will vary based on site conditions, but in addition to a shelter, they may be equipped with additional seating, lighting, passenger information (route maps or schedule information), waste receptacles, or additional/larger shelters. An example of a candidate to become an enhanced bus stop is the bus stop on Joseph Howe Drive at Dutch Village Road, which has on average 420 boardings per day. The photo to the left

5.1.4 Level 4: Transit Hub

This level of bus stop amenity is often found at transit terminals that do not have indoor passenger waiting areas, and also in other major transit terminals/transfer locations with more than 500 boardings per day. This level of stop is a transfer node, and may also have a Park & Ride facility. In addition to Level 3 amenities, these locations could be candidates to be fitted with electronic message boards, bike racks, and payphones, where space permits. Halifax Transit will also investigate the potential for heated shelters at these locations. Examples of locations that could be considered for Level 4 amenities include Highfield Terminal, Cobequid Terminal, Penhorn Terminal, Bayers Road Centre, Tacoma Centre, and major stops adjacent to one of the colleges or universities.

5.1.5 Level 5: Transit Terminal with Interior Passenger Space

This level only exists at transit terminals that have interior passenger waiting space. In addition, these terminals may include public washrooms, drinking fountains, availability of refreshments, and interior seating. There are currently eight Halifax transit terminals that have interior passenger waiting space.

5.2 Transit Terminals

The Halifax Transit network has 16 off-street transit facilities. Maintaining terminal and Park & Ride facilities in a state of good repair is essential to providing a comfortable, convenient location for passengers to access transit service, and to encouraging additional ridership.

Terminals/Park & Rides that are new, or that have been recently upgraded, include: Lacewood Terminal (2015), Alderney Ferry Terminal (2014), Highfield Terminal (2014), Porters Lake Park & Ride (2013), Bridge Terminal (2012), Shel Drake Lake Park & Ride (2012), Fall River Park & Ride (2012), Tantallon Park & Ride (2009), Sackville Terminal (2006), Mic Mac Terminal (2005) and Portland Hills Terminal (2005).

In addition, the Woodside Ferry Terminal and Halifax Ferry Terminal are expected to undergo extensive renovations in the near future.

Halifax Transit does have several older facilities including the Mumford Terminal, Cobequid Terminal, and Penhorn Terminal. The following outlines planned improvements to these facilities:

Mumford Terminal (2019-2022): The existing Mumford Terminal is over capacity, and needs to be replaced before any additional service can be introduced beyond what is described by this plan. This terminal is a key facility in the new network, and existing capacity constraints and minimal passenger amenities reduce the desirability of transferring at this location. The terminal is tentatively scheduled for replacement in 2020/21, with design work starting in 2019/20.

Cobequid & Penhorn Terminals (2020-2022): The existing Cobequid and Penhorn Terminals are scheduled for rehabilitation work necessary to maintain the terminals in a state of good repair. The Penhorn Terminal is scheduled for repair in 2020/2021, and the Cobequid Terminal is scheduled for repair in 2021/2022.

Wrights Cove Terminal (tentatively 2020): Based on the network proposed in this plan, a new terminal is required to facilitate transfers into the Burnside Business Park. This new terminal will be located on Bancroft Lane near the intersection with Windmill Road. This will be a relatively small facility, featuring four to six bus bays, layover space for vehicles, and passenger and bus operator amenities.

This is an operationally important location in order to reduce redundancy in the route network by facilitating transfers for passengers from routes coming from Dartmouth or Sackville into Burnside Business Park. It is also sited adjacent to a developing high density residential development, building a community supportive of Transit Oriented Design principles.

This facility is slated to open in Fall 2020 to coincide with implementation of this plan.

West Bedford Park & Ride (tentatively 2020): This terminal will be located on Innovation Drive in West Bedford, in the middle of a rapidly growing community. The site will be within 500 metres of approximately 8,800 people and also adjacent to the new CP Allen High School. This location can sustain a 350-400 car Park & Ride, and a four bay bus platform. It is estimated that ridership could reach approximately 950 daily boardings at this location. Significant ridership origins are expected from west of Highway 102 from the communities of West Bedford and Hammonds Plains. Transit service demand is expected to grow in-step with these expanding communities, supporting demand for those travelling toward the regional centre and also demand for increased transit service to the employment and nearby institutional destinations in West Bedford. This facility is slated to open in Fall 2020, to coincide with the implementation of this plan.

Margeson Drive Park & Ride (tentatively 2020): This facility is slated for construction in the 2019/2020 Fiscal Year, with service beginning in 2020/2021. Located adjacent to Margeson Drive in Middle Sackville, just south of Highway 101, this terminal will include a Park & Ride lot with space for approximately 500 vehicles and a small platform. This facility will be served by the Route 310 Middle Sackville Regional Express.

5.3 Park & Rides

Today, Halifax Transit provides over 2,035 parking spaces at 14 locations, primarily at transit terminals.

Park & Ride facilities complement transit by providing an option for those who would like to travel by transit but need a vehicle to complete some portion of their trip. These facilities are also important for those who do not have another option to access transit service, for example those living outside the Halifax Transit service area. As most Park & Ride passengers are travelling to downtown, Park & Rides may help to manage roadway congestion and reduce vehicle emissions. However, the implementation of new Park and Rides require careful consideration, for several reasons:

1. **Reliance on Private Vehicles:** The introduction of too much parking can detract from the overarching goal of minimizing private vehicle use, and the introduction of high traffic volumes to a new Park & Ride could have a negative impact on the local community. It could also have the impact of reduced ridership on Local Routes.
2. **Cost:** Building and maintaining Park & Ride facilities often requires large capital investments, typically ranging from \$3,000-\$9,000 per stall. This is costly, considering only about 3% of Halifax Transit users make use of Park & Ride facilities.
3. **Transit Oriented Design:** In some cases, Park & Ride facilities are not the highest and best use of land adjacent to transit terminals. Land near transit facilities is ideal for Transit Oriented Design developments which would include a mixture of land uses, designed to support active transportation and transit. This type of development can result in significantly higher transit ridership than would be generated from a Park & Ride facility.
4. **Commuting costs:** Regular Park & Ride users are unlikely to reduce the number of cars they own, whereas riders who walk or use bus connections can realize significant savings by foregoing ownership of one or more vehicles. The potential for redirecting personal income from multiple car ownership to other interests can be a further incentive for using public transit.

5.3.1 Introducing a new Park & Ride

Despite these drawbacks, carefully planned Park & Rides can have an important role in encouraging sustainable transportation in key locations. The following outlines the conditions in which the creation of a new Park & Ride facility may be considered:

- **New Regional Express Service:** Regional Express services are designed to serve rural, outlying communities in which no local Halifax Transit service exists. These commuter-focused services are dependent on the Park & Rides to allow passengers to access them.
- **Near the Periphery of the Transit Service Area:** New Park & Ride facilities may be considered at or near the urban transit service boundary, as identified in the Regional Plan. This will allow potential transit users the option of driving to a Park & Ride and boarding a transit vehicle to complete their trip.

- **Adjacent to Higher Order Transit:** New Park & Ride facilities may be considered adjacent to a transit facility served by a higher order transit service such as ferry, rail, or Bus Rapid Transit (BRT).
- **Where a High Level of Transit Service is provided adjacent to the Proposed Location:** In addition to the conditions listed above, new Park & Rides will only be considered where a high level of transit service is provided.
- **As an Interim use Pending Transit Oriented Development:** In some locations, a temporary Park & Ride lot may help establish ridership on a new service, with a view to developing the lot as a compact, walkable mixed-use neighbourhood in the longer term.

Part 6: Measuring Success



6 Performance Measures

The guidelines and measures outlined in this section are intended to provide direction related to the level of ridership expected, and measuring the success of the routes described in this plan. These are intended to be guidelines rather than strict standards, as any service changes will be considered on a case by case basis. The application of these guidelines is subject to budget and resource availability.

6.1 Ridership Guidelines

The following table summarizes ridership guidelines by service type. These metrics represent the minimum expectations for ridership as it relates to the amount of service provided by Halifax Transit.

Table 7: Minimum Ridership Guidelines

Service Type	AM & PM Peak	Midday & Saturday	Weekday Evening & Sunday
Corridor Routes	25 passengers/hr	15 passengers/hr	10 passengers/hr
Local Routes			
Rural Routes			
Express and School Routes	20 passengers/trip	N/A	N/A
Regional Express Routes	15 passengers/trip	N/A	N/A

Corridor Routes, Local Routes, and Rural Routes are measured by the average number of passengers per service hour provided in each time period. Express Routes, Regional Express Routes and School Routes are measured by the average number of passengers per trip by period.

6.1.1 Services Exempt from Ridership Standards

The ferry represents a high capacity link connecting Downtown Dartmouth, Downtown Halifax, and Woodside. Due to critical importance of the ferry to the regional transportation network, and its historic and cultural heritage value, this plan does not propose any minimum ridership standards for either ferry route.

In much the same way, the Route 320 Airport/Fall River provides an important connection between Downtown Halifax and the Halifax Stanfield International Airport. Due to the regional significance of this connection from a tourism and economic development perspective, service to the Halifax International Airport is also exempt from minimum ridership guidelines.

6.1.2 Low Ridership Periods

During the midday, evenings, and late at night, it is possible that the minimum guidelines outlined above will not be achieved. Although ridership is typically lower during these periods, Halifax Transit recognizes that the availability of transit service is still important during these periods in order to provide access to employment, and for meeting the recreational, social, and cultural needs of the city. If several trips within a specific time period are underperforming, they will be retained so long as the collective performance of all trips in the specific time period is achieving the ridership guideline outlined above.

If it is determined that service will not attain the target outlined above in a particular period, service spans could be reduced. Underperforming trips, in isolation, will not be removed as this makes for irregular, unpredictable service. However, should the first or last trips of the day underperform continually and

cause the service to fall below the guidelines above, those individual trips could be considered for removal.

6.2 Operations below Ridership Guidelines

When a route is not meeting the ridership guidelines as outlined above, Halifax Transit will consider taking one or more of the following actions:

- Modify the schedule where possible, and where it is anticipated that schedule changes could result in increased ridership;
- Reduce or eliminate off-peak service or reduce service span so the level of transit service provided is more closely aligned with ridership demand;
- Investigate planned developments or public amenities adjacent to the route and consider changes to routing to achieve greater ridership;
- Lead a promotional campaign to raise awareness about the route; or
- If ridership is low over all periods of the day, consider service elimination.

6.2.1 Warrant for Expanding Service Day or Increasing Service Frequency

Any increase to service spans or increase to service frequency will be identified through evaluation of ridership trends and overloads, and may be implemented as budget permits. The introduction of any new service is dependent on the availability of staff and vehicle resources.

6.2.2 Evaluating New, Expanded or Increased Service

When a new route is introduced, it often takes time for ridership to grow to expected levels. Similarly, when a route is subject to significant modifications, or service is introduced in a time period when it was not offered before, there is often a transition period when ridership may decline before increasing, or otherwise increase slowly.

As such, new or highly modified routes should be monitored for a minimum of two years, with interim monitoring at 12 months and 18 months. At the 12 month term, a minimum of 33% of the ridership guideline should be attained, and by 18 months, a minimum of 66% of the ridership guideline should be attained. If the service change is substantial, or if significant adjacent development is anticipated, staff may recommend a longer trial period at the introduction stage of the service. Routes displaying ridership below the guidelines during this timeframe may be modified in an attempt to attract new riders, but should not be significantly altered or discontinued.

6.3 Bus Stop Locations

Halifax Transit considers a resident to be served by transit if they are within 500 metres of a transit stop, or within 1000 metres of a transit terminal. Within the area served by transit, bus stops will be spaced to ensure that a minimum of 90% of all residences will be within 500 metres of at least one transit stop.

6.3.1 Bus Stop Placement

Where possible, bus stops should be placed near intersections, adjacent to passenger generators or at popular destinations. Generally speaking, stops should not be closer together than 250 metres, except in downtown Halifax and within major trip generators where closer spacings may be warranted. Stops may be further than 250 metres apart, provided that larger stops spacings still allow the majority of origins and destinations to be within a 500 metre walk. In areas of lower density, stops should be approximately 500 metres apart. Where possible, stops should be sited adjacent to pedestrian infrastructure like sidewalks and crosswalks.

6.4 Route Directness Guideline

Halifax Transit strives to balance access to transit service with short travel times to help make transit more competitive and attractive.

For the most part, Halifax Transit routes have been designed to operate on major, arterial streets. However, there may be some situations in which a route deviates from the shortest, most direct alignment. Such situations include a mid-route deviation to serve a particular trip generator or end of line terminal loops.

When a deviation exists or is being considered, the gain in convenience to those passengers who are boarding or alighting during the deviation must be balanced against the additional travel time for the passengers travelling through. The following guidelines shall be applied to all route deviations and/or terminal loops:

- To the extent possible, two-way service shall be provided on the same street;
- To the extent possible, mid-route loops will be avoided;
- Express services shall be routed in the most direct manner possible once they depart the local service area;
- For safety reasons, route deviations through parking lots will not be considered; and
- Deviations from the basic route alignment to serve activity centres will be made only when the potential net increase in travel time for riders is less than the net reduction in travel time for those who would benefit from the deviation.

6.5 Route Variation Guideline

In some cases it is more efficient to serve an area with one route having several branches, rather than to operate several different routes. In addition, some trips on a route may not travel the full length of the route. These trips are called short turns. Short turns and branches are examples of variations, which can make the network more difficult for current and potential transit users to understand and use. Therefore, to provide as user-friendly a service as possible, the following guidelines for variations will apply:

- Variations (short turns or branches) will be limited and only used when required for operational purposes; and
- All short turns, branches, or significant variations will be designated with a letter identifier (ex. the route 6A)

6.6 Quality of Service Guidelines

The intent of service quality guidelines is to establish a level of customer convenience that Halifax Transit users can expect from the transit network. These are a commitment to Halifax Transit passengers to improve the quality of service over the life of this plan. The *Moving Forward Together Plan's* Quality of Service Guidelines include on-time performance, loading guidelines, and span of service.

6.6.1 On-Time Performance

While it is impossible to achieve and maintain 100% on-time performance due to traffic and weather conditions, every effort will be made to ensure all Halifax Transit buses and ferries operate on time. To ensure transit users have confidence that service will perform in accordance with public timetables, the following on-time performance guidelines have been established:

- No trips will depart from a published time point more than one minute ahead of schedule. A transit vehicle is considered “on-time” when it departs its published time point at the advertised time or up to three minutes after scheduled departure.
- A vehicle is considered “late” when it departs more than three minutes after the scheduled departure time.

Many transit agencies strive to meet a target of 90% schedule adherence, meaning that buses should be “on time” 90% of the time. Through the introduction of new AVL technology in the next year, Halifax Transit will analyze existing on-time performance across the network and establish a benchmark and target for the minimum percentage of trips to depart on time.

6.6.2 Vehicle Load Guidelines

The intent of a vehicle load guideline is to balance passenger comfort with Halifax Transit's operating costs. Vehicle loading is a significant comfort factor for passengers, and affects the availability of transit service when there is no room on the vehicle for additional passengers to board. It can also negatively impact the travel time of a trip because it takes longer for passengers to board and alight from an overcrowded vehicle.

A vehicle load is calculated by taking the total number of passengers on a bus at a particular location on a route and dividing it by the number of seats available on the transit vehicle. Therefore, the higher the percentage, the more efficient the service. Once the ratio exceeds 100%, however, more and more people have to stand, compromising passenger comfort. For example, if there are 40 seats on a bus, and there are 30 passengers on the bus at that particular location, the vehicle load factor at that spot is 30/40 or 75%. When there are 55 people on the bus a little further along the route, the vehicle load is 137% because there are more passengers than there are seats.

On routes with a high rate of passenger turnover (i.e. lots of passengers get on and off over the course of the trip), the vehicle load guideline is typically higher, and more standees are acceptable. This is because standing passengers will likely not be standing long on these types of routes as seats are vacated by passengers getting off the bus. On the other hand, Express and Regional Express routes have lower passenger turnover; most people will board the bus on one end of the route and get off the bus on the other end. Therefore, it is less likely that a passenger who is standing near the beginning of the trip would stand for the entire trip. In addition, trips on Regional Express Routes are typically longer than those on Express Routes, and for these long journeys, even minimal crowding begins to compromise passenger comfort. As such, the load guidelines for Regional Express Routes are lower than for Express Routes.

To these ends, Halifax Transit's vehicle load guidelines are as follows:

Table 8: Vehicle Load Guidelines by Service Type

Corridor Routes	Local Routes	Express Routes	Regional Express Routes
150%	150%	125%	115%

These load guidelines are intended to be calculated based on the average ridership over a 30 minute period.

If the vehicle load guidelines are consistently exceeded, consideration will be given to reducing overcrowding, although options may vary depending on circumstance and resource availability. This could mean assigning a larger vehicle to the route or trip as needed, adjusting schedule times to better disperse ridership demand, or adding more service to the route.

6.6.3 Span of Service Guidelines

Providing a basic level of service on all Local Routes where possible is the best way to ensure that a route can meet passenger needs over the course of the day. With this in mind, this section identifies a Base Level of service, or a minimum span of service for each service type. Contingent on funding and resource availability, all new service will be introduced with at least a Base Level of service. However, when routes display consistently low ridership, span of service can be reduced to align the service with ridership demand.

The minimum span of service on Local Routes is between the hours of 7:00am and 10:00pm, Monday to Saturday, and 8:00 am and 10:00 pm on Sunday. Additional service can be provided, depending on demand, outside of this span, including earlier morning trips and trips after 10:00pm. All additional service hours are monitored for economic performance and may be adjusted when demand does not meet ridership guidelines.

Base level service on Express Routes and Regional Express Routes include no fewer than two round trips per day (two in the AM peak and two in the PM peak) designed to arrive at their destination no later than 7:30am in the morning, and the last trip to leave its origin no earlier than 5:15 pm. Rural Routes are not subject to the Base Level service as service increases are not possible.

6.6.4 Service Frequency Guidelines

The table below outlines the service frequency guidelines which Halifax Transit will strive to meet, based on customer demand and subject to budget availability:

Figure 11: Service Frequency Guidelines

	Peak	Off-Peak	Saturday	Sunday
Corridor Routes	5 -15 minutes	10-30 minutes	10-30 minutes	10-30 minutes
Local Routes	15-30 minutes	30-60 minutes	30-60 minutes	30-60 minutes
Express Routes	10-30 minutes	N/A	N/A	N/A
Regional Express Routes	10-30 minutes	N/A	N/A	N/A
Rural Routes	Rural routes do not have minimum service frequency guidelines			

Part 7: Transit Priority Measures



7 Transit Priority: Giving Transit The Advantage

Transit Priority Measures (TPMs) are interventions which provides transit vehicles with a competitive time advantage over private vehicles. They can be physical or policy related, and may be as simple as Yield to Bus Legislation (introduced in Nova Scotia May 1, 2011) or as significant as the bus-only roadway known as the Transitway in Ottawa.

There is no “one size fits all” solution to giving transit priority, but often there are multiple TPMs which could be implemented in isolation or along a corridor to provide faster and more reliable transit service. The Transportation Association of Canada’s *Guidelines for Planning and Implementation of Transit Priority Measures (2013)* includes a number of TPMs that are used in Canada. The table below summarizes some of the more common TPMs that have been considered by Halifax Transit, and the transit issues that they can resolve:

Table 9: Example Transit Priority Measures

TPM	Benefit to Transit
Queue jump lane/ Queue bypass lane	<ul style="list-style-type: none"> • Use of a turn lane or conducting a movement that is not available to general traffic can improve transit delay at an intersection. • Can have the effect of creating a transit lane if the lane/permitted movement is underutilized by general traffic.
On street Parking restrictions	<ul style="list-style-type: none"> • Create additional road capacity for use by moving traffic. • Additional capacity can be assigned for exclusive use by transit or to reduce queuing.
Reserved transit lanes	<ul style="list-style-type: none"> • Reduce delay to transit vehicles by removing them from the traffic queues.
Passive Transit Signal Priority (Adjustment to timing plans to favour transit)	<ul style="list-style-type: none"> • Reduce delay/queuing on the roadway benefitting from adjustment of green time.
Separate transit phase or Active Signal phase adjustment	<ul style="list-style-type: none"> • Provide additional green time to buses, leading to reduced transit delay at the signal. • Separate phase can provide a queue jump opportunity where no receiving lane exists.
Traffic signals required by transit	<ul style="list-style-type: none"> • Decrease transit delay/queuing at a stop controlled approach. • May reduce right angle collisions.
Off-street transit centre	<ul style="list-style-type: none"> • Separate stopped buses from moving traffic.

In recent years, Halifax residents and Regional Council have identified the importance of making sure our transportation network is built to accommodate all modes of transportation: pedestrians, cyclists, private vehicles, trucks, and transit. While not all roads are designed or intended to serve all these purposes, it is important that our city is safe and accessible for all residents, no matter how they travel.

In a historic city such as Halifax, however, the narrow road rights of way often mean that widening roads to build a sidewalk, create additional parking, or add another lane for traffic or for transit’s exclusive use is a very costly proposition. Value judgements must be made about where and when significant investment

in Transit Priority Measures makes sense. The following section describes Halifax Transit's process for identifying strong candidates for Transit Priority Measures.

7.1 Investing Where it Makes Sense

The primary focus of any significant capital investment in Transit Priority Measures should be along the ten Corridor Routes. Due to the high level of service on Corridor Routes, these are the areas where TPMs can have the most significant impact. Secondly, roadways with a high through-put of buses will be considered, and thirdly any opportunities or partnerships for TPMs which could be implemented relatively easily will be considered.

7.1.1 Corridor Routes

Corridor Routes are areas where transit plays a significant role in moving large volumes of people and, given the opportunity, could move more. As such, these will be the focus of TPM investment. Roadways serviced by Corridor Routes have a high through-put of buses of all service types, all day, and seven days a week. These roadways experience heavy traffic (particularly during peak hours), carry high volumes of transit passengers, service a variety of destinations and land uses, and are generally well served by pedestrian infrastructure. Transit Priority Measures in these locations will raise the profile of transit service and make a statement to other road users that transit belongs here, and that transit is an important investment to build the sustainability and health of our communities.

In these areas, Transit Priority Measures will be implemented together in a cohesive way along the length of the corridor planned, in order to provide the best advantage possible. It is worthy of note, however, that as Corridor Routes are located on busy, well-travelled roadways throughout Halifax, it is expected that the implementation of TPMs in these locations could have a significant capital cost, and may have a significant impact on traffic both while under construction and once they are in operation.

TPMs Requiring Significant Capital Investment

Although this plan does not include an exhaustive list of large scale TPMs which could greatly benefit the Halifax Transit network, two critical areas have been identified which require significant investment in TPMs in order for Corridor Routes to function properly over the life of this plan. These are:

1. A TPM is required on Bayers Road in order to ensure reliable service on Corridor Routes 1 and 8, as well as a number of other routes. This is particularly important during PM peak, when routes can often be delayed for nearly a half hour. If no TPMs are introduced to address this issue, it will be an operational necessity to realign the routings. In the interim, Route 1 service will be required to travel along Roslyn Street in the PM peak in the outbound direction in order to maintain schedule adherence.
2. A TPM is required to ensure transit vehicles can move reliably through traffic on Gottingen Street. This plan calls for increased service on Gottingen Street, including two way service on Route 1. Due to the high volume of buses on Gottingen Street, the installation of a TPM that allows buses to navigate through the congestion in a more consistent and predictable way would have a significant impact on service quality and reliability.

In order to meet the customer service guidelines related to schedule adherence as outlined in this plan, these TPMs are necessary.

7.1.2 Roadways with High Throughput of Buses

The second priority for investment will be areas where there is a high throughput of buses. This will help move a high volume of transit vehicles and passengers through our busiest roadways quickly and efficiently at all times of the day.

7.1.3 Opportunity Investment

The third priority for investment will be the opportunities which arise from work being undertaken by other departments, or projects which might require very little capital investment but could have a significant impact on transit's reliability. Some examples of this type of project could be:

- The removal of parking on one side of the street during afternoon peak hours;
- Posting a sign to permit transit vehicles to make a movement which is typically not permitted (i.e. "Right Turn Only Except Buses").

7.2 Implementing TPMs: Getting Started

The two locations listed above (Bayers Road and Gottingen Street) are considered the key priority areas where TPMs can have the most significant and immediate positive impact on the transit network. As such, Halifax Transit intends to explore potential alternatives for TPMs in these locations. Due to the complexity and investment required, it is anticipated that it may take several years to design and implement the appropriate measures.

However, a recent study identified 11 possible easily implementable TPMs and evaluated them using the equations outlined in Appendix E. One of those listed (#8, Main Street at Hartlen Street) was implemented in Fall 2015. Based on a number of factors including payback period and scheduled road maintenance, a phased implementation strategy was developed for a five year period. The TPMs examined by this study are included on the table in the following page.

It is anticipated that over the five year implementation of the *Moving Forward Together Plan*, these TPMs will be designed and implemented as resources allow, pending detailed design and costing, and approval from other regulatory bodies

Table 10: Short Term TPM Opportunities

TPM Location		Description
1	Macdonald Bridge @ Wyse Road (WB)	This TPM would reallocate the rightmost toll lane (currently a MacPass Lane for the westbound approach to the Macdonald Bridge) for the exclusive use of transit vehicles. This option builds on the success of the transit only northbound left turn lane from Wyse Road to the Macdonald Bridge and reduces the merging requirements for transit vehicles.
2	Windmill Road @ Victoria Road (NB)	This TPM involves road widening for the northbound direction on Windmill Road, north of the intersection with Victoria Road. An exemption is required to permit transit vehicles to use the existing northbound right turn lane on Victoria Road (into the Ford Dealership driveway) and proceed through into the newly created lane.
3	Windmill Road @ Seapoint Road (SB)	This TPM involves road widening for the southbound direction on Windmill Road, between the intersections at Seapoint Road and Bancroft Lane. An exemption from regulation is required to permit transit vehicles to use the existing southbound right turn lane on Windmill Road at Seapoint Road and proceed through into the newly created lane. Transit vehicles would continue to be exempt from the requirement to turn right onto Bancroft Lane.
4	Portland Street @ Woodlawn Road (WB)	This TPM involves an extension of the existing transit lane to enable access to the lane by transit vehicles from further back in the queue. No change to existing signal timings is required.
5	Barrington Street @ Macdonald Bridge Ramp (NB)	This TPM involves relocating the transit stop and restriping the northbound lanes to restrict the curb lane to right-turning traffic (only traffic proceeding to the bridge). Additional lane configuration changes can be made at the intersection of Barrington Street and North Street; however these additional lane use changes are not necessary to implement this TPM.
6	Windmill Road @ Akerley Boulevard (SB)	This TPM involves the installation of physical separation to eliminate conflicts between southbound through transit vehicles on Windmill Road and left turning vehicles from Akerley Boulevard onto Windmill Road. This then allows for southbound transit vehicles to experience free flow at the traffic signals except when there is a pedestrian crossing Windmill Road.
7	Robie Street @ Almon Street (SB)	This TPM involves an exemption from regulation to permit southbound transit vehicles to proceed straight through the intersection from the curb lane on Robie Street at Almon Street. As there is currently no receiving lane, a transit only phase is also required to accommodate this transit movement.
8	Main Street @ Hartlen Street (NB)	This TPM involves an exemption from regulation to permit northbound transit vehicles to turn left onto Main Street from the curb lane on Hartlen Street. As there is already a second receiving lane for the left-turn movement, a transit only phase is not required to accommodate this TPM.
9	Chebucto Road @ Connaught Avenue (EB)	This TPM involves an exemption from regulation to permit eastbound transit vehicles to proceed through from the curb lane on Chebucto Road at Connaught Avenue. As part of this TPM, the size of the existing channelized island will be reduced and an additional receiving lane will be created to accommodate this movement. With the additional receiving lane, a transit only phase is not required
10	Mumford Road @ Chebucto Road (SB)	This TPM involves restriping the lanes on Mumford Road at the intersection with Chebucto Road to provide a third (transit only) left turn lane from Mumford Road onto Chebucto Road with the reduction to a single northbound lane on Mumford Road. A transit only phase is required to accommodate this TPM.
11	Cobequid Terminal @ Cobequid Road (SB)	This TPM involves installing a protected/permitted phase for westbound left turning vehicles (vehicles leaving the Cobequid Terminal and turning left onto Cobequid Road). No lane modifications are required and no exclusive transit phase is required.

7.3 Developing a Long Term Strategy

While it is important to analyze the impact of an individual Transit Priority Measure on the adjacent transportation network and road users, it is just as important to consider the cumulative impact of a number of Transit Priority Measures when applied in one particular corridor.

For example, on Windmill Road in Dartmouth, the impact of the series of TPMs is more than the sum of each measure's savings. While each intervention seems small on its own – a queue jump lane or transit signal priority – over the course of the corridor, buses save many minutes each day by getting around traffic. When taken together, implementation of Transit Priority Measures across a corridor can have an impact more than the sum of its parts, moving transit vehicles more efficiently and getting passengers to their destination faster and more reliably.

Implementing a series of TPMs along a Transit Priority Way also does more than provide a competitive advantage to transit vehicles. It raises the profile of transit service and creates a positive feedback loop: when passengers or drivers of private vehicles see transit vehicles skipping past traffic snarls using TPMs, they may be encouraged to take the bus in the future, boosting ridership and building the case for further investment in more TPMs.

In addition to the list of TPMs summarized in the table on the preceding pages, it is important that a comprehensive inventory of possible TPMs is compiled and evaluated. From this inventory a cohesive implementation strategy for Transit Priority Ways will be created.

Transit Priority Ways along Corridor Routes can be the first step towards Bus Rapid Transit (BRT) in Halifax. The potential for introducing higher order transit, including BRT, rail, or new ferry routes, was not explored as part of this plan, but will be investigated as part of the Integrated Mobility Plan. It is anticipated that the outcomes of the Integrated Mobility Plan will help to inform and guide investment in TPMs in the long term future.

Part 8: Implementation



8 Plan Implementation

The *Moving Forward Together Plan* is intended to guide Halifax Transit service improvements for the next 20 years or more. In the short term, implementation of the Plan will be focused on reconfiguring the existing route network to adopt the proposed redesigned network. This will take place over approximately five years, in phases based loosely on geographic areas. In the longer term, implementation of the Plan will consist of balancing investments in service quality and reliability with the introduction of new services, both in developing areas, and within the existing network.

8.1 Annual Service Plans

The implementation of service changes proposed in this plan will be solidified and approved through the preparation of Halifax Transit's Annual Service Plans, coinciding with annual budget approval.

An Annual Service Plan is a one year action plan which identifies detailed route and service changes for the forthcoming fiscal year and is developed consistent with the *Moving Forward Together Plan*. In the development of Annual Service Plans, proposals for service changes are reviewed and prioritized.

Annual Service Plans also incorporate the results of several on-going activities, including:

- Regular route assessments based on performance measures and including feedback from employees and consideration of operational issues;
- Review and evaluation of customer requests for new and/or changes to existing services; and
- The effect of external influences such as land-use changes, development proposals and ridership changes.

8.2 Five Year Plan Reviews

To ensure that the *Moving Forward Together Plan* remains current and reflective of the existing needs of Halifax residents, this Plan will be subject to a high level review approximately every five years, with the first review beginning five years after the adoption of the Plan. This review will examine routings, service levels, and other guidelines outlined in this document. The scope of this review will not include changes to the Moving Forward Principles which are at the core of this plan.

In addition, should there be substantial changes to the transportation network that were not anticipated in this Plan, a review should occur that is reflective of the scale of the change.

8.3 Routing Variability

Images and maps in the *Moving Forward Together Plan* are for illustrative purposes, to demonstrate the purpose of routes and connectivity. Proposed routing is subject to change during detailed implementation. Minor modifications to routes based on operational needs, demand, or integration with land uses are anticipated. More substantial modifications are not anticipated but may be necessary to accommodate a significant change to the transportation network or change of circumstances, and will be outlined in each year's Annual Service Plan.

8.4 Stage I – Implementing the Network

In keeping with Moving Forward Principle 3: Invest in Service Quality and Reliability, it is important that the implementation of the new network is informed by data provided by Automatic Vehicle Location (AVL) and Automatic Passenger Counter (APC) units. It is critical that as the plan is implemented, the appropriate level of resources are allocated to ensure schedule reliability and the provision of quality transit service to users. With that in mind, the implementation stages outlined here start with relatively smaller changes to the network, before moving on to larger changes further out in the implementation timeline, at which point significant data will have been collected to inform route and schedule changes.

The following represents a proposed schedule for the phased implementation of the *Moving Forward Together Plan*, contingent on resource availability, and subject to change.

Fiscal Year 2016/2017: The first phase of implementation for the *Moving Forward Together Plan* will be undertaken. As this year will also see the introduction of significant technology advancements, including the launch of real time public interface delivery and stop announcements, the resultant routing changes are necessarily minor to accommodate the staff and resource availability. These changes include:

- An additional trips on the Route 330 Tantallon; and
- Changes to Route 56, discontinuing service to Portland Hills Terminal and introducing a new connection to Bridge Terminal.

Fiscal Year 2017/2018: The second phase of implementation for the *Moving Forward Together Plan* will be undertaken. This will also primarily include smaller changes, and will potentially include the elimination and realignment of low ridership routes/route segments (Routes 402, School Specials), the introduction of some additional express service (Route 186, 330), and changes to several routes (Routes 6, 22, 7, 370).

Fiscal Year 2018/2019: The third phase of implementation for the *Moving Forward Together Plan* will be undertaken. This will primarily include changes to routes in Clayton Park, Fairview, Bedford, and Timberlea. This phase coincides with the expansion of the Burnside Transit Centre.

Fiscal Year 2019/2020: The fourth phase of implementation for the *Moving Forward Together Plan* will be undertaken. This will primarily include implementation in Spryfield and parts of the Halifax Peninsula.

Fiscal Year 2020/2021: The last phase of adopting the new transit network will be undertaken. This will primarily include the implementation of routes in Sackville and Bedford. It also includes the introduction of the Wrights Cove Terminal, West Bedford Park & Ride and the Margeson Drive/Middle Sackville Park & Ride. It will also include the implementation of routes in Dartmouth, Eastern Passage, and Cole Harbour.

External Factors

There are a number of factors external to the *Moving Forward Together Plan* which impact the timing and phasing of network implementation. These include:

1. **The Halifax Transit Technology Plan:** This plan will see the installation of new Automatic Vehicle Location/Computer Aided Dispatch units on all Halifax Transit vehicles in 2016. These new AVL/CAD units will provide Halifax Transit staff with detailed information on ridership and running times of routes over the course of the day. This data will inform the development and refinement of schedules for routes adopted under the *Moving Forward Together Plan*.
2. **The Big Lift:** This project is being undertaken by Halifax Harbour Bridges to extend the life of the Macdonald Bridge by replacing the bridge decking. This project includes continuous overnight closures on the Macdonald Bridge, beginning March 1, 2015, and taking place five nights a week. For the duration of the bridge redecking project, significant resources will be invested by Halifax Transit to provide passengers travelling across the harbour with as seamless a trip as possible. Modifications to routes that are to travel over the Macdonald Bridge in the evenings and are impacted by The Big Lift will not occur until after the completion of this project, anticipated for 2017.
3. **Wrights Cove Terminal Construction:** A number of routes proposed as part of the *Moving Forward Together Plan* rely on the existence of a transit terminal adjacent to the Burnside Business Park. Changes to the proposed timeline for the construction of this terminal may impact the implementation of the Plan.
4. **Resource Availability:** The implementation of the *Moving Forward Together Plan* requires additional resources. Any reductions in anticipated funding levels could have a significant detrimental impact on the ability of Halifax Transit to roll out this plan in the timeline described above. As the plan relies on Regional Council approved budgets to proceed, annual budget approval from Regional Council will steer the implementation of the plan.

8.5 Stage II – Expansion of the Network

During the second stage of implementation, tentatively beginning in 2021, resources must be balanced between re-investment in existing routes as needed to maintain the quality and reliability of the service, and the introduction of new services. It is possible that, during Stage II, new and developing areas could see new transit routes, and existing areas could see the introduction of new routes or services. Details related to the potential service expansion described below will be detailed in the Five Year Review which will take place upon the completion of Stage I implementation.

Building Frequency on Corridor Routes: Where resources are available to improve service frequency, it is the intention of this plan that resources will be focused on increasing service on Corridor Routes first, with the ultimate goal of providing a minimum of 15 minute headways on all Corridor Routes during the service day, subject to ridership demand.

Service in Developing Areas: There are a number of growing and developing areas that may be candidates for Halifax Transit service in the future, following the adoption of the redesigned transit network. Transit service in these areas would be designed in alignment with the four Moving Forward Principles, and subject to resource and road infrastructure availability.

Areas that are developing, or scheduled for further development, that were considered as part of this Plan as potential candidates for future transit service include: Port Wallace, Regency Park Drive, Long Lake Village, Brunello Estates, Seton Ridge, Bedford South (Moirs Mill/Nine Mile Drive), Millwood (currently undeveloped portions), and Bayers Lake and Burnside Business Park expansions.

Future Express Routes – There are some areas that were identified in the preparation of this plan that are considered potential candidates for future Express Routes. These areas could include:

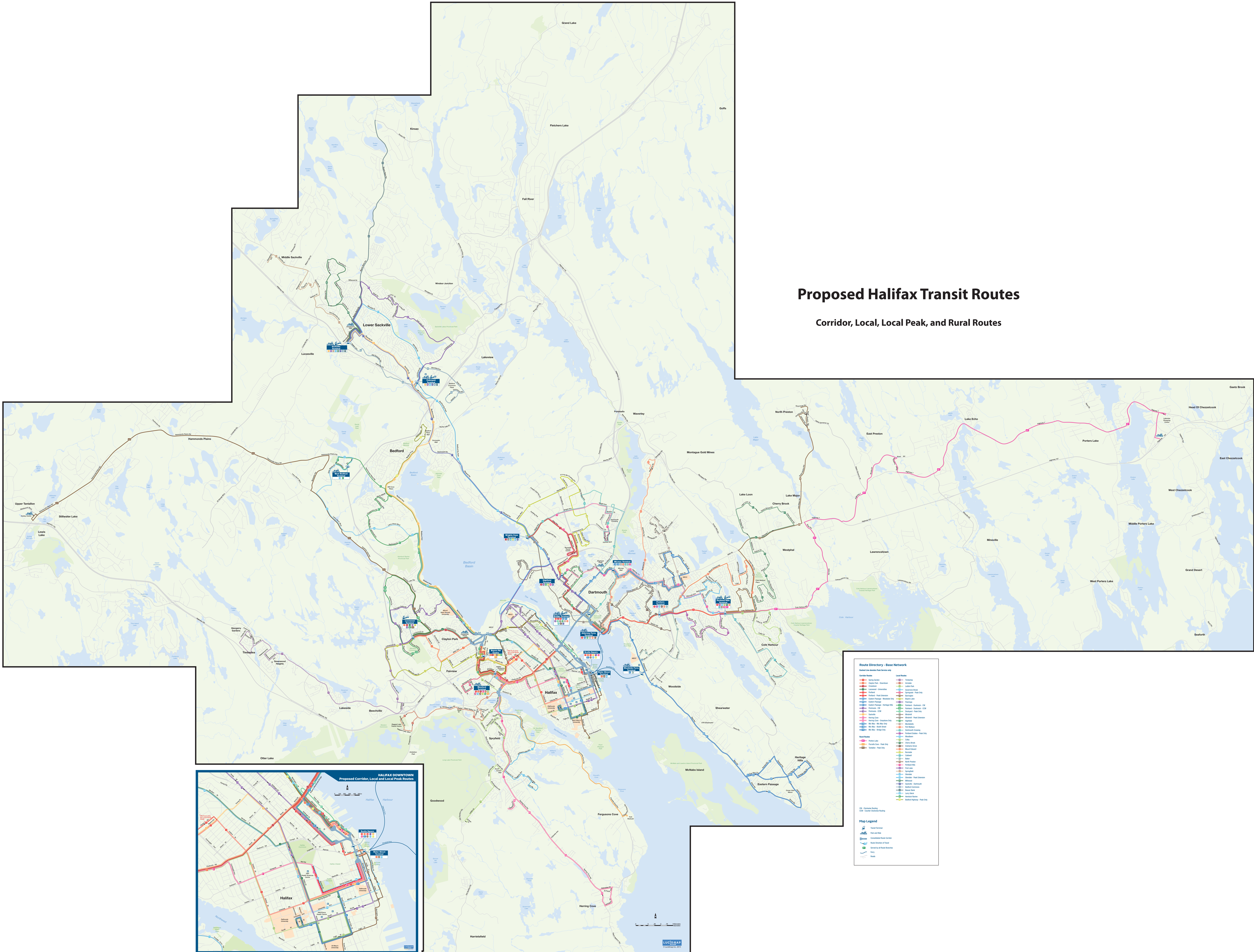
- Williams Lake Road to Downtown Halifax;
- Washmill Lake Drive to Downtown Halifax;
- Montebello to Downtown Halifax;
- Sackville to Burnside;
- North End Halifax to Burnside; and
- Cole Harbour to Burnside.

Appendix A: Network Maps



Proposed Halifax Transit Routes

Corridor, Local, Local Peak, and Rural Routes



Route Directory - Base Network

Small icons representing various route types and numbers, organized in a grid.

Map Legend

- Icons for different transit modes: Bus, Light Rail, etc.
- Icons for different route types: Corridor, Local, etc.



Appendix B: Detailed Route Descriptions



Corridor Routes

Route 1 Spring Garden

Depart Mumford Terminal ~ right on Mumford Road, left on East Perimeter Road, right on Bayers Road, right on Oxford Street, left on Coburg Road, continue on Spring Garden Road, left on Barrington Street, left on Cogswell Street, right on Gottingen Street, right on North Street, continue on Macdonald Bridge, continue on Nantucket Avenue, right into ~ **Bridge Terminal**

Depart Bridge Terminal ~ right on Thistle Street, right on Wyse Road, left on Macdonald Bridge, right on ramp to Barrington Street, continue right on Barrington Street, right on Spring Garden Road, continue on Coburg Road, right on Oxford Street, left on Bayers Road, left on East Perimeter Road, continue into ~ **Mumford Terminal**

PM Peak Outbound

Depart Bridge Terminal ~ right on Thistle Street, right on Wyse Road, left on Macdonald Bridge, right on ramp to Barrington Street, continue right on Barrington Street, right on Spring Garden Road, continue on Coburg Road, right on Oxford Street, left on Roslyn Road, left on Connaught Street, right on Bayers Road, left on East Perimeter Road, continue into ~ **Mumford Terminal**

Route 2 Clayton Park - Downtown

Depart Lacewood Terminal ~ right on Lacewood Drive, right on Willett Street, right on Dunbrack Street, left on Main Avenue, right on Joseph Howe Drive, left on Scot Street, right on Desmond Avenue, right on Bayers Road, left on Joseph Howe Drive, left on Mumford Road, left on Chebucto Road, left on North Street, right on ramp to Barrington Street, continue right on Barrington Street, left on George Street, left on Lower Water Street, right into ~ **Water Street Terminal**

Depart Water Street Terminal ~ left on Duke Street, right on Barrington Street, continue on Upper Water Street, right on Barrington Street, left on North Street, continue on Chebucto Road, right on Mumford Road, left into Mumford Terminal, depart Mumford Terminal left on Mumford Road, right on Joseph Howe Drive, right on Bayers Road, left on Desmond Avenue, left on Scot Street, right on Joseph Howe Drive, left on Dutch Village Road, right on Alma Crescent, right on Titus Street, left on Main Avenue, right on Dunbrack Street, left on Willett Street, left on Lacewood Drive, left into ~ **Lacewood Terminal**

Route 3 Crosstown

Depart Lacewood Terminal ~ right on Lacewood Drive, left on Main Avenue, right on Joseph Howe Drive, left on Scot Street, right on Desmond Avenue, right on Bayers Road, left on Joseph Howe Drive, left on Mumford Road, left on Chebucto Road, left on North Street, continue on Macdonald Bridge, continue on Nantucket Avenue, right into Bridge Terminal, depart Bridge Terminal right on Thistle Street, right on Wyse Road, right on Albro Lake Road, left on Victoria Road, right on Primrose Street, left on Robert Burns Drive, continue on Pinecrest Drive, left into Highfield Terminal, depart Highfield Terminal right on Highfield Park Drive, left on ramp to Burnside Transit Centre, continue on Ilsley Avenue, left on Wright Avenue, continue on Bancroft Lane into ~ **Wrights Cove Terminal**

Depart Wrights Cove Terminal ~ via Bancroft Lane, continue on Wright Avenue, right on Ilsley Avenue, continue on turning loop at Burnside Transit Centre, continue on Ilsley Avenue, right on Ronald Smith Avenue, right on Burnside Drive, continue on Highfield Park Drive, left into Highfield Terminal, depart Highfield Terminal right on Pinecrest Drive, continue on Robert Burns Drive, right on Primrose Street, left on Victoria Road, right on Albro Lake Road, left on Wyse Road, left on Nantucket Avenue, right into Bridge Terminal, depart Bridge Terminal right on Thistle Street, right on Wyse Road, left on Macdonald

Bridge, continue on North Street, continue on Chebucto Road, right on Mumford Road, left into Mumford Terminal, depart Mumford Terminal left on Mumford Road, right on Joseph Howe Drive, right on Bayers Road, left on Desmond Avenue, left on Scot Street, right on Joseph Howe Drive, left on Dutch Village Road, right on Alma Crescent, right on Titus Street, continue on Lacewood Drive, left into ~ **Lacewood Terminal**

Route 4 Lacewood - Universities

Depart Lacewood Terminal ~ right on Lacewood Drive, left on Main Avenue, continue on Fairview Overpass, right on Windsor Street, left on Cunard Street, right on Robie Street, left on Spring Garden Road, right on South Park Street, right on South Street, right on Robie Street, left on South Street, right on Le Marchant Street ~ **Dalhousie Student Union Building**

Depart Dalhousie Student Union Building ~ right on University Avenue, right on Seymour Street, left on South Street, right on Robie Street, left on Inglis Street, left on South Park Street, left on Spring Garden Road, right on Robie Street, left on Cunard Street, right on Windsor Street, left on Bedford Highway, right on ramp to Joseph Howe Drive, continue on Joseph Howe Drive, right on Dutch Village Road, right on Alma Crescent, right on Titus Street, continue on Lacewood Drive, left into ~ **Lacewood Terminal**

Route 5 Portland

Depart Portland Hills Terminal ~ left on Portland Street, continue on Portland Street, right into Penhorn Terminal, depart Penhorn Terminal right on Portland Street, left on Alderney Drive, right on Wyse Road, right on Thistle Street, left into Bridge Terminal, depart Bridge Terminal right on Thistle Street, right on Wyse Road, left on Macdonald Bridge, right on ramp to Barrington Street, continue right on Barrington Street to ~ **Scotia Square**

Depart Scotia Square ~ southbound on Barrington Street, right on Duke Street, right on Brunswick Street, left on Cogswell Street, right on Gottingen Street, right on North Street, continue on Macdonald Bridge, continue on Nantucket Avenue, right into Bridge Terminal, depart Bridge Terminal right on Thistle Street, left on Wyse Road, left on Alderney Drive, right on Portland Street, left into Penhorn Terminal, depart Penhorn Terminal left on Portland Street, continue on Portland Street, right into ~ **Portland Hills Terminal**

Route 5X Portland PEAK EXTENSION

AM PEAK

Depart Portland Hills Terminal ~ left on Portland Street, continue on Portland Street, right into Penhorn Terminal, depart Penhorn Terminal right on Portland Street, left on Alderney Drive, right on Wyse Road, right on Thistle Street, left into Bridge Terminal, depart Bridge Terminal right on Thistle Street, right on Wyse Road, left on Macdonald Bridge, right on ramp to Barrington Street, continue right on Barrington Street, right on Spring Garden Road, right on Summer Street to ~ **Bell Road**

PM PEAK

Depart Summer Street ~ left on Spring Garden Road, left on Barrington Street, left on Cogswell Street, right on Gottingen Street, right on North Street, continue on Macdonald Bridge, continue on Nantucket Avenue, right into Bridge Terminal, depart Bridge Terminal right on Thistle Street, left on Wyse Road, left on Alderney Drive, right on Portland Street, left into Penhorn Terminal, depart Penhorn Terminal left on Portland Street, continue on Portland Street, right into ~ **Portland Hills Terminal**

Route 6A Woodside

Depart Bridge Terminal ~ right on Thistle Street, left on Wyse Road, left on Alderney Drive, right on Portland Street, right on Pleasant Street, right on Atlantic Street, right into ~ **Woodside Ferry Terminal**

Depart Woodside Ferry Terminal ~ left on Atlantic Street, left on Pleasant Street, left on Portland Street, left on Alderney Drive, right on Wyse Road, right on Thistle Street, left into ~ **Bridge Terminal**

Route 6B Eastern Passage

Depart Bridge Terminal ~ right on Thistle Street, left on Wyse Road, left on Alderney Drive, right on Portland Street, right on Pleasant Street, right on Atlantic Street, right into Woodside Ferry Terminal, depart Woodside Ferry Terminal left on Atlantic Street, right on Pleasant Street, continue on Main Road, left on Cow Bay Road, right on Caldwell Road to ~ **Oceanview Manor**

Depart Oceanview Manor ~ Caldwell Road, right on Shore Road, continue on Main Road, continue on Pleasant Street, left on Atlantic Street, right into Woodside Ferry Terminal, depart Woodside Ferry Terminal left on Atlantic Street, left on Pleasant Street, left on Portland Street, left on Alderney Drive, right on Wyse Road, right on Thistle Street, left into ~ **Bridge Terminal**

Route 6C Heritage Hills

Depart Bridge Terminal ~ right on Thistle Street, left on Wyse Road, left on Alderney Drive, right on Portland Street, right on Pleasant Street, right on Atlantic Street, right into Woodside Ferry Terminal, depart Woodside Ferry Terminal left on Atlantic Street, right on Pleasant Street, continue on Main Road, left on Cow Bay Road, left on Hornes Road, right on Caldwell Road, left on Cow Bay Road, right on ~ **Samuel Danial Drive**

Depart Samuel Danial Drive ~ right on Melrose Crescent, right on Heritage Hills Drive, left on Cow Bay Road, right on Caldwell Road, left on Hornes Road, right on Cow Bay Road, right on Main Road, continue on Pleasant Street, left on Atlantic Street, right into Woodside Ferry Terminal, depart Woodside Ferry Terminal left on Atlantic Street, left on Pleasant Street, left on Portland Street, left on Alderney Drive, right on Wyse Road, right on Thistle Street, left into ~ **Bridge Terminal**

Route 7A Peninsula

Depart North Ridge Road ~ continue on Novalea Drive, left on Kencrest Avenue, right on Glebe Street, left on Novalea Drive, continue on Gottingen Street, left on Cogswell Street, right on Barrington Street, right on South Street, right on Robie Street, right on Leeds Street, left on Novalea Drive, continue on ~ **North Ridge Road**

Route 7B Peninsula

Depart North Ridge Road ~ continue on Novalea Drive, right on Leeds Street, left on Robie Street, continue left on Robie Street, left on South Street, left on Barrington Street, left on Cogswell Street, right on Gottingen Street, continue on Novalea Drive, right on Glebe Street, left on Kencrest Avenue, right on Novalea Drive, continue on ~ **North Ridge Road**

Route 8 Sackville

Depart Scotia Square ~ southbound on Barrington Street, right on Spring Garden Road, right on Robie Street, left on Young Street, continue on Bayers Road, right on Desmond Avenue, left on Scot Street, right on Joseph Howe Drive, continue left on Bedford Highway, continue on Sackville Drive, right on Cobequid Road, left into Cobequid Terminal, depart Cobequid Terminal right on Cobequid Road, right on Sackville Drive, left into Downsview parking lot, continue to Downsview Drive, continue on Walker Avenue, right into ~ **Sackville Terminal**

Depart Sackville Terminal ~ left on Walker Avenue, continue on Downsview Drive, continue through Downsview parking lot, right on Sackville Drive, left on Cobequid Road, left into Cobequid Terminal, depart Cobequid Terminal right on Cobequid Road, left on Sackville Drive, continue on Bedford Highway, right on Joseph Howe Drive, left on Scot Street, right on Desmond Avenue, continue on Bayers Road, continue on Young Street, right on Robie Street, left on Spring Garden Road, left on Barrington Street, continue on Upper Water Street, left on Barrington Street to ~ **Scotia Square**

Route 9A Greystone

Depart Scotia Square ~ southbound on Barrington Street, right on Spring Garden Road, right on Summer Street, left on Bell Road, continue on Quinpool Road, right on Connaught Avenue, left on Chebucto Road, right on Mumford Road, left into Mumford Terminal, depart Mumford Terminal right on Mumford Road, right on Chebucto Road, continue on Armdale Roundabout, right on Herring Cove Road, right on ~ **Greystone Drive**

Depart Greystone Drive ~ left on Herring Cove Road, continue on Armdale Roundabout, right on Chebucto Road, left on Mumford Road, left into Mumford Terminal, depart Mumford Terminal right on Mumford Road, left on Chebucto Road, right on Connaught Avenue, left on Quinpool Road, continue on Bell Road, right on Summer Street, left on Spring Garden Road, left on Barrington Street, continue on Upper Water Street, left on Barrington Street to ~ **Scotia Square**

Route 9B Herring Cove

Depart Scotia Square ~ southbound on Barrington Street, right on Spring Garden Road, right on Summer Street, left on Bell Road, continue on Quinpool Road, right on Connaught Avenue, left on Chebucto Road, right on Mumford Road, left into Mumford Terminal, depart Mumford Terminal right on Mumford Road, right on Chebucto Road, continue on Armdale Roundabout, right on Herring Cove Road, left on ~ **Lancaster Drive**

Depart Lancaster Drive ~ left on Hebridean Drive, right on Herring Cove Road, continue on Armdale Roundabout, right on Chebucto Road, left on Mumford Road, left into Mumford Terminal, depart Mumford Terminal right on Mumford Road, left on Chebucto Road, right on Connaught Avenue, left on Quinpool Road, continue on Bell Road, right on Summer Street, left on Spring Garden Road, left on Barrington Street, continue on Upper Water Street, left on Barrington Street to ~ **Scotia Square**

Route 10A Mic Mac

Depart Dalhousie Student Union Building ~ right on University Avenue, right on Seymour Street, left on South Street, right on Robie Street, left on Inglis Street, left on South Park Street, right on Spring Garden Road, left on Barrington Street, left on Cogswell Street, right on Gottingen Street, right on North Street, continue on Macdonald Bridge, right on Wyse Road, left on Thistle Street, left into Bridge Terminal, depart Bridge Terminal right on Nantucket Street, left on Victoria Road, right on Woodland Avenue, right on Mic Mac Boulevard, left into ~ **Mic Mac Terminal**

Depart Mic Mac Terminal ~ right on Mic Mac Boulevard, left on Woodland Avenue, left on Victoria Road, right on Thistle Street, right into Bridge Terminal, depart Bridge Terminal right on Thistle Street, right on Wyse Road, left on Macdonald Bridge, right on ramp to Barrington Street, continue right on Barrington Street, right on Spring Garden Road, left on South Park Street, right on Inglis Street, right on Robie Street, left on South Street, right on Le Marchant Street to ~ **Dalhousie Student Union Building**

Route 10B Mic Mac – Booth Street

Depart Dalhousie Student Union Building ~ right on University Avenue, right on Seymour Street, left on South Street, right on Robie Street, left on Inglis Street, left on South Park Street, right on Spring Garden Road, left on Barrington Street, left on Cogswell Street, right on Gottingen Street, right on North Street, continue on Macdonald Bridge, right on Wyse Road, left on Thistle Street, left into Bridge Terminal, depart Bridge Terminal right on Nantucket Street, left on Victoria Road, right on Woodland Avenue, right on Mic Mac Boulevard, left into Mic Mac Terminal, depart Mic Mac Terminal left on Mic Mac Boulevard, left on Mic Mac Boulevard, right on ramp to Circumferential Highway 111, continue right on Main Street, right on Hartlen Street, left on Tacoma Drive, right on Valleyfield Road, left on Spikenard Street, left on Woodlawn Road, right on Main Street, left on Booth Street, continue on Kennedy Drive, right on Caledonia Road, left on Dumbarton Avenue, left on Kincardine Drive, left on ~ **Inverary Drive**

Depart Inverary Drive ~ right on Strath Lane, left on Raymoor Drive, right on Main Street, left on Weyburn Road, right on Spikenard Street, right on Valleyfield Road, left on Tacoma Drive, right on Hartlen Street, left on Main Street, continue on Circumferential Highway 111, right on ramp to Mic Mac Boulevard, left on Mic Mac Boulevard, right on Mic Mac Boulevard, left on Woodland Avenue, left on Victoria Road, right on Thistle Street, right into Bridge Terminal, depart Bridge Terminal right on Thistle Street, right on Wyse Road, left on Macdonald Bridge, right on ramp to Barrington Street, continue right on Barrington Street, right on Spring Garden Road, left on South Park Street, right on Inglis Street, right on Robie Street, left on South Street, right on Le Marchant Street to ~ **Dalhousie Student Union Building**

Route 10C Bridge

Depart Dalhousie Student Union Building ~ right on University Avenue, right on Seymour Street, left on South Street, right on Robie Street, left on Inglis Street, left on South Park Street, right on Spring Garden Road, left on Barrington Street, left on Cogswell Street, right on Gottingen Street, right on North Street, continue on Macdonald Bridge, right on Wyse Road, left on Thistle Street, left into ~ **Bridge Terminal**,

Depart Bridge Terminal ~ right on Thistle Street, right on Wyse Road, left on Macdonald Bridge, right on ramp to Barrington Street, continue right on Barrington Street, right on Spring Garden Road, left on South Park Street, right on Inglis Street, right on Robie Street, left on South Street, right on Le Marchant Street to ~ **Dalhousie Student Union Building**

Local Routes

Route 21 Timberlea

Depart Lacewood Terminal ~ left on Lacewood Drive, continue on Chain Lake Drive, right on Susie Lake Crescent, left on Horseshoe Lake Drive, left on Chain Lake Drive, right on Lakelands Boulevard, right on St. Margarets Bay Road, left on Brentwood Drive, right on Eisener Street, right on Maplewood Drive, left on St. Margarets Bay Road, left on James Street, right on Forestglen Drive, left on ~ **Fraser Road**

Depart Fraser Road ~ left on Charles Road, right on James Street, right on St. Margarets Bay Road, right on Maplewood Drive, left on Eisener Street, left on Brentwood Drive, right on St. Margarets Bay Road, left on Lakelands Boulevard, left on Chain Lake Drive, right on Horseshoe Lake Drive, right on Susie Lake Crescent, left on Chain Lake Drive, continue on Lacewood Drive, right into ~ **Lacewood Terminal**

Route 22 Armdale

Depart Mumford Terminal ~ right on Mumford Road, right on Chebucto Road, continue on Armdale Roundabout, right on St. Margarets Bay Road, left on Quarry Road, left on Edgehill Road, right on Glenmore Avenue, left on Stonehaven Road, right on Alton Drive, left on Kelly Street, right on Osborne Street, right on Walter Havill Drive, continue on Albert Walker Drive, left on St. Margarets Bay Road, left on Prospect Road, right on Ragged Lake Boulevard, right on ~ **Grassy Lake Drive**

Depart Grassy Lake Drive ~ Ragged Lake ramp, right on St. Margarets Bay Road, right on Albert Walker Drive, continue on Walter Havill Drive, left on Osborne Street, left on Kelly Street, right on Alton Drive, left on Stonehaven Road, right on Glenmore Avenue, left on Edgehill Road, right on Quarry Road, right on St. Margarets Bay Road, continue on Armdale Roundabout, right on Chebucto Road, left on Mumford Road, left into ~ **Mumford Terminal**

Route 24 Leiblin Park

Depart Leiblin Drive ~ left on Rockingstone Road, continue on Old Sambro Road, right on Dentith Road, left on Herring Cove Road, left on Highfield Street, right on Ridge Valley Road, right on Cowie Hill Road, left on Margaret Road, left on Mountain Road, right on Tamarack Drive, right on Osborne Street, continue on Mayo Street, continue on Withrod Drive, left on Herring Cove Road, continue on Armdale Roundabout, right on Joseph Howe Drive, right on Mumford Road, left Chebucto Road, right on Oxford Street, left on South Street, right on South Park Street, right on ~ **Inglis Street**

Depart Inglis Street ~ right on Robie Street, left on South Street, right on Oxford Street, left on Chebucto Road, right on Mumford Road, left into Mumford Terminal, depart Mumford Terminal left on Mumford Road, left on Joseph Howe Drive, continue on Armdale Roundabout, right on Herring Cove Road, right on Withrod Drive, continue on Mayo Street, continue on Osborne Street, left on Tamarack Drive, left on Mountain Road, right on Margaret Road, right on Cowie Hill Road, left on Ridge Valley Road, left on Highfield Street, right on Herring Cove Road, right on Dentith Road, left on Old Sambro Road, continue on Rockingstone Road, right on Leiblin Drive, left on Juniper Crescent, right on ~ **Leiblin Drive**

Route 25 Governors Brook

Depart Mumford Terminal ~ right on Mumford Road, right on Chebucto Road, continue on Armdale Roundabout, right on Herring Cove Road, left on Purcells Cove Road, right on Williams Lake Road, left on Herring Cove Road, left on Pinegrove Drive, left on Theakston Avenue, right on Danforth Road, left on Katrina Crescent, continue to ~ **Alabaster Way**

Depart Alabaster Way ~ right on Lier Ridge, right on Quartz Drive, left on Alabaster Way, continue on Katrina Crescent, right on Danforth Road, left on Theakston Avenue, right on Pinegrove Drive, right on Herring Cove Road, right on Williams Lake Road, left on Purcells Cove Road, right on Herring Cove Road, continue on Armdale Roundabout, right on Chebucto Road, left on Mumford Road, left into ~ **Mumford Terminal**

Route 26 Springvale – PEAK ONLY

Depart Mumford Terminal ~ left on Mumford Road, left on Joseph Howe Drive, right on Springvale Avenue, left on Winter Street, right on Downs Avenue, right on Milsom Street, right on Springvale Avenue, left on Joseph Howe Drive, right on Mumford Road, right into ~ **Mumford Terminal**

Route 29 Barrington

Depart Desmond Avenue ~ right on Bayers Road, left on Joseph Howe Drive, left on Mumford Road, left on East Perimeter Road, right on Bayers Road, left on Connaught Avenue, left on Windsor Street, right on Lady Hammond Road, continue on Duffus Street, right on Barrington Street, continue right on Barrington Street, left on George Street, left into Water Street Terminal, depart Water Street Terminal on Upper Water Street, left on Hollis Street, left on Barrington Street, continue on Inglis Street, left on Tower Road, continue to ~ **Point Pleasant Park turning loop**

Depart Point Pleasant Park turning Loop ~ continue on Tower Road, right on Inglis Street, continue on Barrington Street, right on Hollis Street, right on Terminal Road, left on Lower Water Street, right into Water Street Terminal, depart Water Street Terminal left on Duke Street, right on Barrington Street, continue on Upper Water Street, right on Barrington Street, left on Duffus Street, continue on Lady Hammond Road, left on Windsor Street, right on Connaught Avenue, right on Bayers Road, left on East Perimeter Road, continue into Mumford Terminal, depart Mumford Terminal left on Mumford Road, right on Joseph Howe Drive, right on Scot Street, right on ~ **Desmond Avenue**

Route 31 Bayers Lake

Depart Lacewood Terminal ~ left on Lacewood Drive, continue on Chain Lake Drive, left on Washmill Lake Drive, left on North West Arm Drive, right on Main Avenue, right on Willett Street, left on Rosedale Avenue, right on Dutch Village Road, left on Joseph Howe Drive, right on Scot Street, right on Desmond Avenue, continue on Bayers Road, right on East Perimeter Road, continue into ~ **Mumford Terminal**

Depart Mumford Terminal ~ right on Mumford Road, left on East Perimeter Road, left on Bayers Road, right on Desmond Avenue, left on Scot Street, left on Joseph Howe Drive, right on Dutch Village Road, left on Rosedale Avenue, right on Willett Street, left on Main Avenue, left on North West Arm Drive, right on Washmill Lake Drive, right on Chain Lake Drive, continue on Lacewood Drive, right into ~ **Lacewood Terminal**

Route 32 Flamingo

Depart Lacewood Terminal ~ left on Lacewood Drive, right on Parkland Drive, right on Farnham Gate Road, right on Dunbrack Street, left on Knightsridge Drive, right on Flamingo Drive, right on Bedford Highway, continue on Fairview Overpass, left to MacKay Bridge, right on MacKay Bridge, right on ramp to Victoria Road, left on Highfield Park Drive, right into Highfield Terminal, depart Highfield Terminal right on Pinecrest Drive, continue on Roberts Burns Drive, right on Primrose Street, left on Victoria Road, right on Boland Road, left on Wyse Road, left on Nantucket Avenue, right into ~ **Bridge Terminal**

Depart Bridge Terminal ~ right on Thistle Street, right on Wyse Road, right on Boland Road, left on Victoria Road, right on Primrose Street, left on Robert Burns Drive, continue on Pinecrest Drive, left into Highfield Terminal, depart Highfield Terminal left on Highfield Park Drive, right on Victoria Road, right on ramp to MacKay Bridge, continue on MacKay Bridge, continue on Fairview Overpass, continue on Bedford Highway, left on Flamingo Drive, left on Knightsridge Drive, right on Dunbrack Street, left on Farnham Gate Road, left on Parkland Drive, left on Lacewood Drive, right into ~ **Lacewood Terminal**

Route 34A Parkland - Dunbrack

Depart Lacewood Terminal ~ right on Lacewood Drive, left on Dunbrack Street, continue on Kearney Lake Road, left on Parkland Drive, continue on Regency Park Drive, left on Thomas Raddall Drive, right on Lacewood Drive, right into ~ **Lacewood Terminal**

Route 34B Parkland - Dunbrack

Depart Lacewood Terminal ~ left on Lacewood Drive, left on Thomas Raddall Drive, right on Regency Park Drive, continue on Parkland Drive, right on Kearney Lake Road, continue on Dunbrack Street, right on Lacewood Drive, left into ~ **Lacewood Terminal**

Route 50 Dockyard/Shipyard – PEAK ONLY

AM PEAK

Depart Bridge Terminal ~ right on Thistle Street, right on Wyse Road, left on Macdonald Bridge, right on ramp to Barrington Street, continue on Valour Way to Dockyard, right on Upper Water Street, right on Barrington Street, continue to ~ **Niobe Gate Bridge, Halifax Shipyard**

PM PEAK

Depart Niobe Gate Bridge, Halifax Shipyard ~ southbound on Barrington Street, left on Valour Way, left on Upper Water Street, right on Cogswell Street, right on Gottingen Street, right on North Street, continue on Macdonald Bridge, continue on Nantucket Avenue, right into ~ **Bridge Terminal**

Route 51 Windmill

Depart Bridge Terminal ~ right on Thistle Street, left on Wyse Road, right on Windmill Road, left on Princess Margaret Boulevard, left on Baffin Boulevard, right on Hudson Way, left on Princess Margaret Boulevard, continue on Killkee Gate, right on ~ **Princess Margaret Boulevard**

Depart Princess Margaret Boulevard ~ left on Princess Margaret Boulevard, right on Windmill Road, left on Wyse Road, right on Thistle Street, left into ~ **Bridge Terminal**

Route 51X Windmill PEAK EXTENSION

Depart Bridge Terminal ~ right on Thistle Street, left on Wyse Road, right on Windmill Road, left on Princess Margaret Boulevard, left on Baffin Boulevard, right on Hudson Way, left on Princess Margaret Boulevard, continue on Killkee Gate, right on Princess Margaret Boulevard, left on Princess Margaret Boulevard, left on Windmill Road, left on Victoria Road, continue on Windmill Road, left on Bancroft Lane into ~ **Wrights Cove Terminal**

Depart Wrights Cove Terminal ~ via Bancroft Lane, right on Windmill Road, continue right on Windmill Road, right on Princess Margaret Boulevard, left on Baffin Boulevard, right on Hudson Way, left on Princess Margaret Boulevard, continue on Killkee Gate, right on Princess Margaret Boulevard, left on Princess Margaret Boulevard, right on Windmill Road, left on Wyse Road, right on Thistle Street, left into ~ **Bridge Terminal**

Route 53 Highfield

Depart Alderney Gate ~ southbound on Alderney Drive, left on King Street, left on Queen Street, right on Alderney Drive, right on Wyse Road, right on Thistle Street, left into Bridge Terminal, depart Bridge

Terminal right on Thistle Street, right on Wyse Road, right on Albro Lake Road, left on Leaman Drive, left on Crystal Drive, right on Pinecrest Drive, right into ~ **Highfield Terminal**

Depart Highfield Terminal ~ left on Pinecrest Drive, left on Crystal Drive, right on Leaman Drive, right on Albro Lake Road, left on Wyse Road, left on Nantucket Avenue, right into Bridge Terminal, depart Bridge Terminal right on Thistle Street, left on Wyse Road, left on Alderney Drive to ~ **Alderney Gate**

Route 54 Montebello

Depart Bridge Terminal ~ right on Thistle Street, left on Wyse Road, left on Alderney Drive, left on King Street, right on Ochterloney Street, left on Crichton Avenue, right on Glen Manor Drive, left on Mic Mac Boulevard, right into Mic Mac Terminal, depart Mic Mac Terminal left on Mic Mac Boulevard, left on Mic Mac Boulevard, right on ramp to Circumferential Highway 111, continue on Main Street, right on Hartlen Street, left on Tacoma Drive, right on Valleyfield Road, left on Spikenard Street, left on Woodlawn Road, continue on Caledonia Road, right on Avenue du Portage, left on Madeline Place, left on Lexington Avenue, right on ~ **Breeze Drive**

Depart Breeze Drive ~ left on Columbo Drive, left on Appian Way, right on Colonna Place, left on Montebello Drive, right on Caledonia Road, continue on Woodlawn Road, right on Spikenard Street, right on Valleyfield Road, left on Tacoma Drive, right on Hartlen Street, left on Main Street, continue on Circumferential Highway 111, right on ramp to Mic Mac Boulevard, left on Mic Mac Boulevard, right on Mic Mac Boulevard, right into Mic Mac Terminal, depart Mic Mac Terminal left on Mic Mac Boulevard, right on Glen Manor Drive, left on Crichton Avenue, right on Ochterloney Street, left on King Street, right on Queen Street, right on Alderney Drive, right on Wyse Road, right on Thistle Street, left into ~ **Bridge Terminal**

Route 55 Port Wallace

Depart Bridge Terminal ~ right on Thistle Street, left on Wyse Road, left on Alderney Drive, left on King Street, right on Ochterloney Street, left on Crichton Avenue, right on Glen Manor Drive, left on Mic Mac Boulevard, right into Mic Mac Terminal, depart Mic Mac Terminal left on Mic Mac Boulevard, left on Mic Mac Boulevard, right on ramp to Circumferential Highway 111, right on ramp to Waverly Road, continue on Braemar Drive, continue on Waverly Road, left on ~ **Charles Keating Drive**

Depart Charles Keating Drive ~ left on Craighburn Drive, right on Waverly Road, continue on Braemar Drive, left on ramp to Circumferential Highway 111, right on ramp to Mic Mac Boulevard, left on Mic Mac Boulevard, right on Mic Mac Boulevard, right into Mic Mac Terminal, depart Mic Mac Terminal left on Mic Mac Boulevard, right on Glen Manor Drive, left on Crichton Avenue, right on Ochterloney Street, left on King Street, right on Queen Street, right on Alderney Drive, right on Wyse Road, right on Thistle Street, left into ~ **Bridge Terminal**

Route 56 Dartmouth Crossing

Depart Bridge Terminal ~ left on Thistle Street, right on Crichton Park Road, left on Crichton Avenue, right on Glen Manor Drive, left on Mic Mac Boulevard, right on Woodland Avenue, continue on Highway 118, right on ramp to Wright Avenue, left on Wright Avenue, right on ramp to Countryview Drive, continue on Gale Terrace, right on Finnian Row, right on Lamont Terrace, right on Commodore Drive, left on Countryview Drive, left on Shubie Drive, right on Finlay Drive, left on Wright Avenue, right on Wilkinson Avenue, left on Jennett Avenue, left on John Savage Avenue, right on Wright Avenue, continue on Bancroft Lane into ~ **Wrights Cove Terminal**

Depart Wrights Cove Terminal ~ via Bancroft Lane, continue on Wright Avenue, left on John Savage Avenue, right on Jennett Avenue, right on Wilkinson Avenue, left on Wright Avenue, right on Finlay Drive,

left on Shubie Drive, right on Countryview Drive, continue on Gale Terrace, right on Finnian Row, right on Lamont Terrace, right on Commodore Drive, left on Countryview Drive, right on Wright Avenue, right on Highway 118, continue on Woodland Avenue, left on Mic Mac Boulevard, left into Mic Mac Terminal, depart Mic Mac Terminal left on Mic Mac Boulevard, right on Glen Manor Drive, left on Crichton Avenue, right on Crichton Park Road, left on Thistle Street, right into ~ **Bridge Terminal**

Route 57 Portland Estates PEAK ONLY

Depart Portland Hills Terminal ~ left on Portland Street, left on Portland Hills Drive, continue on Portland Estates Boulevard West, right on Russell Lake Drive, left on Eisener Boulevard, left on Portland Street, right into ~ **Penhorn Terminal**

Depart Penhorn Terminal ~ left on Portland Street, right on Eisener Boulevard, right on Russell Lake Drive, left on Portland Estates Boulevard West, continue on Portland Hills Drive, right on Portland Street, right into ~ **Portland Hills Terminal**

Route 58 Woodlawn

Depart Portland Hills Terminal ~ left on Portland Street, right on Regal Road, left on Collins Grove, right on Spring Avenue, right on Dorothea Drive, left on Lucien Drive, left on Windward Avenue, left on Lea Street, right on Topsail Boulevard, left on Plaza Drive, left on Belle Vista Drive, left on Spring Avenue, right on Ellenvale Avenue, right on Waltdale Drive, left on Belle Vista Drive, left on Woodlawn Road, right on Portland Street, right into ~ **Penhorn Terminal**

Depart Penhorn Terminal ~ left on Portland Street, left on Woodlawn Road, right on Belle Vista Drive, right on Waltdale Drive, left on Ellenvale Avenue, left on Spring Avenue, right on Belle Vista Drive, right on Plaza Drive, right on Topsail Boulevard, left on Lea Street, right on Windward Avenue, right on Lucien Drive, right on Dorothea Drive, left on Spring Avenue, left on Collins Grove, right on Regal Road, left on Portland Street, right into ~ **Portland Hills Terminal**

Route 59 Colby

Depart Portland Hills Terminal ~ right on Portland Street, continue on Cole Harbour Road, right on Ashgrove Avenue, left on Colby Drive, continue on Cumberland Drive, left on Cole Harbour Road, continue on Portland Street, left into ~ **Portland Hills Terminal**

Route 61 Cherry Brook

Depart Portland Hills Terminal ~ right on Portland Street, continue on Cole Harbour Road, left on Forest Hills Parkway, right on Merrimac Drive, left on Arklow Drive, left on John Stewart Drive, right on Auburn Drive, right on Hillsboro Drive, continue on Montague Road, right on Lake Loon Road, left on ~ **Cherry Brook Road**

Depart Cherry Brook Road ~ right on Highway 7, left on Hillsboro Drive, left on Auburn Drive, left on John Stewart Drive, right on Arklow Drive, right on Merrimac Drive, left on Forest Hills Parkway, right on Cole Harbour Road, continue on Portland Street, left into ~ **Portland Hills Terminal**

Route 62 Grahams Grove

Depart Bridge Terminal ~ right on Thistle Street, left on Wyse Road, left on Alderney Drive, left on King Street, right on Ochterloney Street, left on Crichton Avenue, right on Hawthorne Street, left on Sinclair

Street, right on Prince Albert Road, continue right on Prince Albert Road, right on Harris Road, right on Beacon Street, left on Penhorn Drive, right on Somerset Street, left on Oathill Crescent, left on Peddars Way, left on Manor Drive, left on Portland Street, left into Penhorn Terminal, depart Penhorn Terminal right on Portland Street, left on Gaston Road, continue to ~ **Gaston Road turning loop**

Depart Gaston Road turning loop ~ right on Portland Street, left into Penhorn Terminal, depart Penhorn Terminal right on Portland Street, right on Manor Drive, right on Peddars Way, right on Oathill Crescent, right on Somerset Street, left on Penhorn Drive, right on Beacon Street, left on Harris Road, left on Prince Albert Road, left on Sinclair Street, right on Hawthorne Street, left on Crichton Avenue, right on Ochterloney Street, left on King Street, right on Queen Street, right on Alderney Drive, right on Wyse Road, right on Thistle Street, left into ~ **Bridge Terminal**

Route 63 Mount Edward

Depart Penhorn Terminal ~ left on Portland Street, left on Woodlawn Road, continue on Mount Edward Road, right on Cranberry Crescent, continue on Wildwood Boulevard, right on Gregory Drive, left on Flying Cloud Drive, right on Forest Hills Parkway, right on Cole Harbour Road, continue on Portland Street, left into ~ **Portland Hills Terminal**

Depart Portland Hills Terminal ~ right on Portland Street, continue on Cole Harbour Road, left on Forest Hills Parkway, left on second entrance to Flying Cloud Drive, right on Gregory Drive, left on Wildwood Boulevard, continue on Cranberry Crescent, left on Mount Edward Road, continue on Woodlawn Road, right on Portland Street, right into ~ **Penhorn Terminal**

Route 64 Burnside – WEEKDAY ONLY

Depart Highfield Terminal ~ right on Highfield Park Drive, continue on Burnside Drive, right on Commodore Drive, right on Brownlow Avenue, left on Eileen Stubbs Avenue, right on Commodore Drive, left on John Savage Avenue, left on Garland Avenue, continue on Williams Avenue, right on Frazee Avenue, left on John Savage Avenue, continue on Gloria McCluskey Avenue, left on Colford Avenue, right on Akerley Boulevard, left on Windmill Road, right on Bancroft Lane into ~ **Wrights Cove Terminal**

Depart Wrights Cove Terminal ~ via Bancroft Lane, left on Windmill Road, right on Akerley Boulevard, left on Colford Avenue, right on Gloria McCluskey Avenue, continue on John Savage Avenue, right on Frazee Avenue, left on Williams Avenue, continue on Garland Avenue, right on John Savage Avenue, right on Commodore Drive, left on Eileen Stubbs Avenue, right on Brownlow Avenue, left on Commodore Drive, left on Burnside Drive, continue on Highfield Park Drive, left into ~ **Highfield Terminal**

Route 65 Caldwell

Depart Portland Hills Terminal ~ right on Portland Street, right on Caldwell Road, left on Astral Drive, right on Sherwood Street, right on Caldwell Road, right on Brookfield Avenue, left on Astral Drive, right on Caldwell Road, left on Portland Street, left into ~ **Portland Hills Terminal**

Route 67 Baker Drive

Depart Woodside Ferry Terminal ~ left on Atlantic Street, left on Pleasant Street, right on Acadia Street, left on Mount Hope Avenue, left on Baker Drive, left on Portland Street, right into Penhorn Terminal, depart Penhorn Terminal left on Portland Street, left on Woodlawn Road, left on Woodlawn Road, left on Spikenard Street, right on Valleyfield Rd, left on Tacoma Drive, right on Hartlen Street, left on Main Street, continue on Circumferential Highway 111, right on ramp to Mic Mac Boulevard, left on Mic Mac Boulevard, right on Mic Mac Boulevard, right into ~ **Mic Mac Terminal**

Depart Mic Mac Terminal ~ left on Mic Mac Boulevard, left on Mic Mac Boulevard, right on ramp to Circumferential Highway 111, continue on Main Street, right on Hartlen Street left on Tacoma Drive, right on Valleyfield Road, left on Spikenard Street, right on Woodlawn Road, right on Woodlawn Road, right on Portland Street, right into Penhorn Terminal, depart Penhorn Terminal left on Portland Street, right on Baker Drive, right on Mount Hope Avenue, right on Acadia Street, left on Pleasant Street, right on Atlantic Street, right into ~ **Woodside Ferry Terminal**

Route 68 North Preston

Depart Portland Hills Terminal ~ right on Portland Street, continue on Cole Harbour Road, left on Otago Drive, right on Poplar Drive, right on Circassion Drive, left on Forest Hills Parkway, right on Highway 7, left on Lake Major Road, continue on North Preston Road, left on Simmonds Road, left into ~ **North Preston Recreation Centre turning loop**

Depart North Preston Recreation Centre Loop ~ right on Simmonds Road, right on North Preston Road, right on Cain Street, left on Clarence Street, left on Johnson Road, right on North Preston Road, continue on Lake Major Road, right on Highway 7, left on Forest Hills Parkway, right on Circassion Drive, left on Poplar Drive, left on Otago Drive, right on Cole Harbour Road, continue on Portland Street, left into ~ **Portland Hills Terminal**

Route 72 Portland Hills - Dartmouth Crossing

Depart Portland Hills Terminal ~ left on Portland Street, right on Regal Road, left on Collins Grove, right on Spring Avenue, left on Ellenvale Avenue, right on Waltdale Drive, left on Belle Vista Drive, right on Woodlawn Road, left on Woodlawn Road, left on Spikenard Street, right on Valleyfield Road, left on Tacoma Drive, right on Hartlen Street, left on Main Street, continue on Circumferential Highway 111, right on ramp to Mic Mac Boulevard, left on Mic Mac Boulevard, right on Mic Mac Boulevard, continue on Lancaster Drive, left on Sea King Drive, continue on Albro Lake Road right on Pinecrest Drive, right into Highfield Terminal, depart Highfield Terminal right on Highfield Park Drive, left on ramp to Burnside Transit Centre, continue on IIsley Avenue, right on Wright Avenue, right on Finlay Drive, left on Shubie Drive, right on Countryview Drive, continue on Gale Terrace, right on Finnian Row, right on Lamont Terrace, right on ~ **Commodore Drive**

Depart Commodore Drive ~ left on Countryview Drive, left on Shubie Drive, right on Finlay Drive, left on Wright Avenue, left on IIsley Avenue, left on Ronald Smith Avenue, right on Burnside Drive, continue on Highfield Park Drive, left into Highfield Terminal, depart Highfield Terminal left on Pinecrest Drive, left on Albro Lake Road, continue on Sea King Drive, right on Lancaster Drive, continue on Mic Mac Boulevard, left into Mic Mac Terminal, depart Mic Mac Terminal left on Mic Mac Boulevard, left on Mic Mac Boulevard, right on ramp to Circumferential Highway 111, continue on Main Street, right on Hartlen Street, left on Tacoma Drive, right Valleyfield Road, left on Spikenard Street, right on Woodlawn Road, right on Woodlawn Road, left on Belle Vista Drive, right on Waltdale Drive, left on Ellenvale Avenue, right on Spring Avenue, left on Collins Grove, right on Regal Road, left on Portland Street, right into ~ **Portland Hills Terminal**

Route 82 First Lake

Depart Sackville Terminal ~ left on Walker Avenue, continue on Downsview Drive, continue through Downsview parking lot, left on Sackville Drive, right on Beaver Bank Road, right on Stokil Drive, right on Nordic Crescent, left on Nictaux Drive, right on Nappan Drive, right on Nictaux Drive, right on Metropolitan Avenue, left on First Lake Drive, continue on First Lake Drive, right on Cobequid Road, right into ~ **Cobequid Terminal**

Depart Cobequid Terminal ~ left Cobequid Road, left on First Lake Drive, continue on First Lake Drive, right on Metropolitan Avenue, left on Nictaux Drive, left on Nappan Drive, left on Nictaux Drive, right on Nordic Crescent, left on Stokil Drive, left on Beaver Bank Road, left on Sackville Drive, right into Downsview parking lot, continue to Downsview Drive, continue on Walker Avenue, right into ~ **Sackville Terminal**

Route 83 Springfield

Depart Sackville Terminal ~ left on Walker Avenue, left on Old Sackville Road, continue on Old Sackville Road, right on Melham Drive, left on Sackville Drive, left on Beaconsfield Way, right on Darlington Drive, left on Hanwell Drive, right on Swindon Drive, right on Margeson Drive, left on Sackville Drive, left on Springfield Avenue, continue to ~ **Springfield Avenue turning loop**

Depart Springfield Avenue turning loop ~ right on Sackville Drive, right on Margeson Drive, left on Swindon Drive, left on Hanwell Drive, right on Darlington Drive, left on Beaconsfield Way, right on Sackville Drive, right on Melham Drive, left on Old Sackville Road, right on Walker Avenue, right into ~ **Sackville Terminal**

Route 84 Glendale

Depart Sackville Terminal ~ left on Walker Avenue, continue on Downsview Drive, continue through Downsview parking lot, left on Sackville Drive, right on Beaver Bank Road, right on Glendale Drive, right on Cobequid Road, right into Cobequid Terminal, depart Cobequid Terminal right on Cobequid Road, left on Sackville Drive, right on ramp to Dartmouth, continue on Bedford Bypass, continue on Windmill Road, right on Bancroft Lane into Wrights Cove Terminal, depart Wrights Cove Terminal via Bancroft Lane, right on Windmill Road, continue on Victoria Road, right on ramp to MacKay Bridge, continue left to Barrington Street, continue on Barrington Street to ~ **Scotia Square**

Depart Scotia Square ~ northbound on Barrington Street, continue on Upper Water Street, right on Barrington Street, left on ramp to MacKay Bridge, continue on MacKay Bridge, right on ramp to Bedford, continue on Victoria Road, continue on Windmill Road, left on Bancroft Lane into Wrights Cove Terminal, depart Wrights Cove Terminal via Bancroft Lane, left on Windmill Road, continue on Bedford Bypass, right on ramp to Cobequid Road, continue into Cobequid Terminal, depart Cobequid Terminal left on Cobequid Road, left on Glendale Drive, left on Beaver Bank Road, left on Sackville Drive, right into Downsview parking lot, continue to Downsview Drive, continue on Walker Avenue, right into ~ **Sackville Terminal**

Route 84X Glendale PEAK EXTENSION

AM PEAK

Depart Sackville Terminal ~ left on Walker Avenue, continue on Downsview Drive, continue through Downsview parking lot, left on Sackville Drive, right on Beaver Bank Road, right on Glendale Drive, right on Cobequid Road, right into Cobequid Terminal, depart Cobequid Terminal right on Cobequid Road, left on Sackville Drive, right on ramp to Dartmouth, continue on Bedford Bypass, continue on Windmill Road, right on Bancroft Lane into Wrights Cove Terminal, depart Wrights Cove Terminal via Bancroft Lane, right

on Windmill Road, continue on Victoria Road, right on ramp to MacKay Bridge, continue left to Barrington Street, continue on Barrington Street, right on Spring Garden Road, right on Summer Street to ~ **Bell Road**

PM PEAK

Depart Summer Street ~ left on Spring Garden Road, left on Barrington Street, continue on Upper Water Street, right on Barrington Street, left on ramp to MacKay Bridge, continue on MacKay Bridge, right on ramp to Bedford, continue on Victoria Road, continue on Windmill Road, left on Bancroft Lane into Wrights Cove Terminal, depart Wrights Cove Terminal via Bancroft Lane, left on Windmill Road, continue on Bedford Bypass, right on ramp to Cobequid Road, continue into Cobequid Terminal, depart Cobequid Terminal left on Cobequid Road, left on Glendale Drive, left on Beaver Bank Road, left on Sackville Drive, right into Downsview parking lot, continue to Downsview Drive, continue on Walker Avenue, right into ~ **Sackville Terminal**

Route 85 Millwood

Depart Sackville Terminal ~ left on Walker Avenue, continue on Downsview Drive, continue through Downsview parking lot, left on Sackville Drive, right on Millwood Drive, left on Jackladder Drive, right on Rossing Drive, left on Millwood Drive, right on Beaver Bank Cross Road, left on Sackville Drive, right into Downsview parking lot, continue to Downsview Drive, continue on Walker Avenue, right into ~ **Sackville Terminal**

Route 87 Sackville - Dartmouth

Depart Sackville Terminal ~ left on Walker Avenue, continue on Downsview Drive, continue through Downsview parking lot, right on Sackville Drive, left on Cobequid Road, left into Cobequid Terminal, depart Cobequid Terminal right on Cobequid Road, left on Sackville Drive, continue on Bedford Highway, left on Dartmouth Road, continue on Windmill Road, right on Bancroft Lane into Wrights Cove Terminal, depart Wrights Cove Terminal via Bancroft Lane, right on Windmill Road, continue on Victoria Road, left on Highfield Park Drive, right into Highfield Terminal, depart Highfield Terminal right on Pinecrest Drive, continue on Robert Burns Drive, right on Primrose Street, left on Victoria Road, right on Thistle Street, right into ~ **Bridge Terminal**

Depart Bridge Terminal ~ right on Nantucket Avenue, left on Victoria Road, right on Primrose Street, left on Robert Burns Drive, continue on Pinecrest Drive, left into Highfield Terminal, depart Highfield Terminal left on Highfield Park Drive, right on Victoria Road, continue on Windmill Road, left on Bancroft Lane into Wrights Cove Terminal, depart Wrights Cove Terminal via Bancroft Lane, left on Windmill Road, left on ramp to Bedford, continue on Dartmouth Road, right on Bedford Highway, continue on Sackville Drive, right on Cobequid Road, left into Cobequid Terminal, depart Cobequid Terminal right on Cobequid Road, right on Sackville Drive, left into Downsview parking lot, continue to Downsview Drive, continue on Walker Avenue, right into ~ **Sackville Terminal**

Route 88 Bedford Common

Depart Sackville Terminal ~ right on Walker Avenue, right on Old Sackville Road, continue on Cobequid Road, left into Cobequid Terminal, depart Cobequid Terminal left on Cobequid Road, right on Glendale Avenue, continue on Duke Street, right on ~ **Damascus Road**

Depart Damascus Road ~ continue on Verdi Drive, right on Damascus Road, left on Duke Street, continue on Glendale Avenue, left on Cobequid Road, right into Cobequid Terminal, depart Cobequid Terminal right on Cobequid Road, continue on Old Sackville Road, left on Walker Avenue, left into ~ **Sackville Terminal**

Route 89 Beaver Bank

Depart Sackville Terminal ~ left on Walker Avenue, continue on Downsview Drive, continue through Downsview parking lot, left on Sackville Drive, right on Beaver Bank Road, [**on School Trip**~ right on Majestic Avenue, right on Monarch Drive, left into Monarch Drive Elementary School, depart Monarch Drive Elementary School right on Monarch Drive, left on Majestic Avenue, right on Beaver Bank Road] right into ~ **Kinsac Community Centre**

Depart Kinsac Community Centre ~ left on Beaver Bank Road, [**on School Trip**~ left on Majestic Avenue, right on Monarch Drive, left into Monarch Drive Elementary School, depart Monarch Drive Elementary School right on Monarch Drive, left on Majestic Avenue, left on Beaver Bank Road], left on Sackville Drive, right in Downsview parking lot, continue to Downsview Drive, continue on Walker Avenue, right into ~ **Sackville Terminal**

Route 90 Larry Uteck

Leave Water Street Terminal ~ continue on Upper Water Street, left on Hollis Street, right on Morris Street, continue on University Avenue, right on Robie Street, left on Cunard Street, right on Windsor Street, left on Bedford Highway, left on Larry Uteck Boulevard, continue on Larry Uteck Boulevard, right on Broad Street, left on Gary Martin Drive, right on Hammonds Plains Road, right on Innovation Drive, left into ~ **West Bedford Park & Ride**

Depart West Bedford Park & Ride ~ left on Innovation Drive, left on Gary Martin Drive, right on Broad Street, left on Larry Uteck Boulevard, continue on Larry Uteck Boulevard, right on Bedford Highway, right on Windsor Street, left on Cunard Street, right on Robie Street, left on University Avenue, continue on Morris Street, left on Lower Water Street, right into ~ **Water Street Terminal**

Route 91 Hemlock Ravine

Depart West Bedford Park & Ride ~ left on Innovation Drive, right on Gary Martin Drive, right on Hammonds Plains Road, right on Bedford Highway, right on Nelsons Landing Boulevard, right on Amin Street, left on Moirs Mill Road, left on Royal Masts Way, right on Oceanview Drive, left on Nine Mile Drive, continue on Starboard Drive, right on Larry Uteck Boulevard, right on Bedford Highway, right on Joseph Howe Drive, left on Scot Street, right on Desmond Avenue, right on Bayers Road, left on Joseph Howe Drive, left on Mumford Road, right into ~ **Mumford Terminal**

Depart Mumford Terminal ~ left on Mumford Road, right on Joseph Howe Drive, right on Bayers Road, left on Desmond Avenue, left on Scot Street, right on Joseph Howe Drive, left on Bedford Highway, left on Larry Ute Boulevard, left on Starboard Drive, continue on Nine Mile Drive, right on Oceanview Drive, left on Royal Mast Way, right on Moirs Mill Road, right on Amin Street, left on Nelsons Landing Boulevard, left on Bedford Highway, left on Hammonds Plains Road, left on Innovation Drive, left into ~ **West Bedford Park & Ride**

93 Bedford Highway – PEAK ONLY

AM PEAK

Depart Union Street ~ left on Bridge Street, left on Nottingham Street, right on Union Street, right on Bedford Highway, continue on Lady Hammond Road, continue on Duffus Street, right on Devonshire Avenue, right on Barrington Street, continue on Barrington Street to ~ **Scotia Square**

PM PEAK

Depart Scotia Square ~ northbound on Barrington Street, continue on Upper Water Street, right on Barrington Street, left on Devonshire Avenue, left on Duffus Street, continue on Lady Hammond Road, continue on Bedford Highway, left on Union Street, left on Bridge Street, left on ~ **Nottingham Street**

Express Routes

Route 123 Timberlea Express

AM PEAK

Depart Fraser Road ~ left on Charles Road, right on James Street, right on St. Margarets Bay Road, right on Maplewood Drive, left on Eisener Street, left on Brentwood Drive, right on St. Margarets Bay Road, continue on St. Margarets Bay Road, continue on Armdale Roundabout, right on Quinpool Road, right on Bell Road, right on Summer Street, left on Spring Garden Road, left on Barrington Street to ~ **Scotia Square**

PM PEAK

Depart Scotia Square ~ southbound on Barrington Street, right on Spring Garden Road, right on Summer Street, left on Bell Road, continue left on Quinpool Road, continue on Armdale Roundabout, right on St. Margarets Bay Road, continue on St. Margarets Bay Road, left on Brentwood Avenue, right on Eisener Street, right on Maplewood Drive, left on St. Margarets Bay Road, left on James Street, right on Forestglen Drive, left on ~ **Fraser Road**

Route 124 Leiblín Express

AM PEAK

Depart Old Sambro Road ~ left on Dentith Road, left on Herring Cove Road, left on Highfield Street, right on Ridge Valley Road, right on Cowie Hill Road, left on Herring Cove Road, right on Quinpool Road, continue right on Bell Road, right on Summer Street, left on Spring Garden Road, left on Barrington Street to ~ **Scotia Square**

PM PEAK

Depart Scotia Square ~ southbound on Barrington Street, right on Spring Garden Road, right on Summer Street, left on Bell Road, continue left on Quinpool Road, continue on Armdale Roundabout, right on Herring Cove Road, right on Cowie Hill Road, left on Ridge Valley Road, left on Highfield Street, right on Herring Cove Road, right on Old Sambro Road, left on Dentith Road to ~ **Herring Cove Road**

Route 135 Flamingo Express

AM PEAK

Depart Bedford Highway Opposite Mount Saint Vincent University ~ northbound on Bedford Highway, left on Flamingo Drive, left on Knightsridge Drive, left on Dunbrack Street, right on Radcliffe Drive, continue into Lacewood Terminal, depart Lacewood Terminal right on Lacewood Drive, left on Main Avenue, continue on Fairview Overpass, continue on Lady Hammond Road, right on Kempt Road, left on

Young Street, right on Gottingen Street, left on Cogswell Street, continue on Hollis Street, right on Morris Street, continue on ~ **University Avenue**

PM PEAK

Depart University Avenue ~ continue on University Avenue, continue on Morris Street, left on Lower Water Street, continue on Upper Water Street, left on Duke Street, right on Barrington Street, left on Cogswell Street, right on Gottingen Street, left on Young Street, right on Kempt Road, left on Lady Hammond Road, continue on Bedford Highway, right on ramp to Joseph Howe Drive, continue on Joseph Howe Drive, right on Dutch Village Road, right on Alma Crescent, right on Titus Street, continue on Lacewood Drive, left into Lacewood Terminal, depart Lacewood Terminal, continue on Radcliffe Drive, left on Dunbrack Street, right on Knightsridge Drive, right on Flamingo Drive, right on ~ **Bedford Highway**

Route 136 Farnham Express

AM PEAK

Depart Farnham Gate Road at Dunbrack Street ~ left on Parkland Drive, left on Lacewood Drive, right into Lacewood Terminal, depart Lacewood Terminal right on Lacewood Drive, right on Willett Street, left on Rosedale Avenue, left on Dutch Village Road, continue right on Dutch Village Road, left on Joseph Howe Drive, right on ramp to Fairview Overpass, continue on Lady Hammond Road, right on Kempt Road, left on Young Street, right on Gottingen Street, left on Cogswell Street, continue on Hollis Street, right on Morris Street, continue on ~ **University Avenue**

PM PEAK

Depart University Avenue ~ continue on University Avenue, continue on Morris Street, left on Lower Water Street, continue on Upper Water Street, left on Duke Street, right on Barrington Street, left on Cogswell Street, right on Gottingen Street, left on Young Street, right on Kempt Road, left on Lady Hammond Road, continue on Bedford Highway, right on ramp to Joseph Howe Drive, continue on Joseph Howe Drive, right on Dutch Village Road, continue left on Dutch Village Road, left to stay on Dutch Village Road, right on Rosedale Avenue, right on Willett Street, left on Lacewood Drive, left into Lacewood Terminal, depart Lacewood Terminal left on Lacewood Drive, right on Parkland Drive, right on ~ **Farnham Gate Road**

Route 137 Regency Park Express

AM PEAK

Depart Lacewood Terminal ~ left on Lacewood Drive, left on Regency Park Drive, left on Washmill Lake Drive, left on North West Arm Drive, right on Main Avenue, continue on Fairview Overpass, continue on Lady Hammond Road, right on Kempt Road, left on Young Street, right on Gottingen Street, left on Cogswell Street, continue on Hollis Street, right on Morris Street, continue on ~ **University Avenue**

PM PEAK

Depart University Avenue ~ continue on University Avenue, continue on Morris Street, left on Lower Water Street, continue on Upper Water Street, left on Duke Street, right on Barrington Street, left on Cogswell Street, right on Gottingen Street, left on Young Street, right on Kempt Road, left on Lady Hammond Road, continue on Bedford Highway, right on ramp to Joseph Howe Drive, continue on Joseph Howe Drive, right on Dutch Village Road, right on Alma Crescent, right on Titus Street, left on Main Avenue, left on North West Arm Drive, right on Washmill Lake Drive, right on Regency Park Drive, right on Lacewood Drive, right into ~ **Lacewood Terminal**

Route 138 Parkland Express

AM PEAK

Depart Dunbrack Street at Wentworth Drive ~ continue on Dunbrack Street, continue on Kearney Lake Road, left on Parkland Drive, left on Lacewood Drive, right into Lacewood Terminal, depart Lacewood Terminal right on Lacewood Drive, right on Willett Street, right on Dunbrack Street, left on Main Avenue, continue on Fairview Overpass, continue on Lady Hammond Road, right on Kempt Road, left on Young Street, right on Gottingen Street, left on Cogswell Street, continue on Hollis Street, right on Morris Street, continue on ~ **University Avenue**

PM PEAK

Depart University Avenue ~ continue on University Avenue, continue on Morris Street, left on Lower Water Street, continue on Upper Water Street, left on Duke Street, right on Barrington Street, left on Cogswell Street, right on Gottingen Street, left on Young Street, right on Kempt Road, left on Lady Hammond Road, continue on Bedford Highway, right on ramp to Joseph Howe Drive, continue on Joseph Howe Drive, right on Dutch Village Road, right on Alma Crescent, right on Titus Street, left on Main Avenue, right on Dunbrack Street, left on Willett Street, left on Lacewood Drive, left into Lacewood Terminal, depart Lacewood Terminal left on Lacewood Drive, right on Parkland Drive, right on Kearney Lake Road, continue on ~ **Dunbrack Street**

Route 158 Woodlawn Express

AM PEAK

Depart Portland Hills Terminal ~ left on Portland Street, right on Regal Road, left on Collins Grove, right on Spring Avenue, right on Dorothea Drive, left on Lucien Drive, left on Windward Avenue, left on Lea Street, right on Topsail Boulevard, left on Plaza Drive, left on Belle Vista Drive, left on Spring Avenue, right on Ellenvale Avenue, right on Waltdale Drive, left on Belle Vista Drive, left on Woodlawn Road, right on Portland Street, left on Alderney Drive, right on Wyse Road, right on Thistle Street, left into Bridge Terminal, depart Bridge Terminal right on Thistle Street, right on Wyse Road, left on Macdonald Bridge, right on ramp to Barrington Street, left on Hollis Street, right on Morris Street, continue on ~ **University Avenue**

PM PEAK

Depart University Avenue ~ continue on University Avenue, continue on Morris Street, left on Lower Water Street, continue on Upper Water Street, left on Duke Street, right on Barrington Street, left on Cogswell Street, right on Gottingen Street, right on North Street, continue on Macdonald Bridge, continue on Nantucket Avenue, right into Bridge Terminal, depart Bridge Terminal right on Thistle Street, left on Wyse Road, left on Alderney Drive, right on Portland Street, left into Penhorn Terminal, depart Penhorn Terminal left on Portland Street, left on Woodlawn Road, right on Belle Vista Drive, right on Waltdale Drive, left on Ellenvale Avenue, left on Spring Avenue, right on Belle Vista Drive, right on Plaza Drive, right on Topsail Boulevard, left on Lea Street, right on Windward Avenue, right on Lucien Drive, right on Dorothea Drive, left on Spring Avenue, left on Collins Grove, right on Regal Road, left on Portland Street, right into ~ **Portland Hills Terminal**

Route 159 Colby Express

AM PEAK

Depart Portland Hills Terminal ~ right on Portland Street, continue on Cole Harbour Road, right on Ashgrove Avenue, left on Colby Drive, continue on Cumberland Drive, left on Cole Harbour Road, continue on Portland Street, left into Portland Hills Terminal, depart Portland Hills Terminal left on Portland Street, left on Alderney Drive, right on Wyse Road, right on Thistle Street, left into Bridge Terminal, depart Bridge Terminal right on Thistle Street, right on Wyse Road, left on Macdonald Bridge, right on ramp to Barrington Street, left on Hollis Street, right on Morris Street, continue on ~ **University Avenue**

PM PEAK

Depart University Avenue ~ continue on University Avenue, continue on Morris Street, left on Lower Water Street, continue on Upper Water Street, left on Duke Street, right on Barrington Street, left on Cogswell Street, right on Gottingen Street, right on North Street, continue on Macdonald Bridge, continue on Nantucket Avenue, right into Bridge Terminal, depart Bridge Terminal right on Thistle Street, left on Wyse Road, left on Alderney Drive, right on Portland Street, left into Penhorn Terminal, depart Penhorn Terminal left on Portland Street, right into Portland Hills Terminal, depart Portland Hills Terminal right on Portland Street, continue on Cole Harbour Road, right on Ashgrove Avenue, left on Colby Drive, continue on Cumberland Drive, left on Cole Harbour Road, continue on Portland Street, left into ~ **Portland Hills Terminal**

Route 161A Cherry Brook Express

AM PEAK

Depart Portland Hills Terminal ~ right on Portland Street, continue on Cole Harbour Road, left on Forest Hills Parkway, right on Merrimac Drive, left on Arklow Drive, left on John Stewart Drive, right on Auburn Drive, right on Hillsboro Drive, continue on Montague Road, right on Lake Loon Road, left on Cherry Brook Road, right on Cherry Brook Road, right on Highway 7, left on Hillsboro Drive, left on Auburn Drive, left on John Stewart Drive, right on Arklow Drive, right on Merrimac Drive, left on Forest Hills Parkway, right on Cole Harbour Road, continue on Portland Street, left into Portland Hills Terminal, depart Portland Hills Terminal left on Portland Street, left on Alderney Drive, right on Wyse Road, right on Thistle Street, left into Bridge Terminal, depart Bridge Terminal right on Thistle Street, right on Wyse Road, left on Macdonald Bridge, right on ramp to Barrington Street, left on Hollis Street, right on Morris Street, continue on ~ **University Avenue**

PM PEAK

Depart University Avenue ~ continue on University Avenue, continue on Morris Street, left on Lower Water Street, continue on Upper Water Street, left on Duke Street, right on Barrington Street, left on Cogswell Street, right on Gottingen Street, right on North Street, continue on Macdonald Bridge, continue on Nantucket Avenue, right into Bridge Terminal, depart Bridge Terminal right on Thistle Street, left on Wyse Road, left on Alderney Drive, right on Portland Street, left into Penhorn Terminal, depart Penhorn Terminal left on Portland Street, right into Portland Hills Terminal, depart Portland Hills Terminal right on Portland Street, continue on Cole Harbour Road, left on Forest Hills Parkway, right on Merrimac Drive, left on Arklow Drive, left on John Stewart Drive, right on Auburn Drive, right on Hillsboro Drive, continue on Montague Road, right on Lake Loon Road, left on Cherry Brook Road, right on Cherry Brook Road, right on Highway 7, left on Hillsboro Drive, left on Auburn Drive, left on John Stewart Drive, right on Arklow Drive, right on Merrimac Drive, left on Forest Hills Parkway, right on Cole Harbour Road, continue on Portland Street, left into ~ **Portland Hills Terminal**

Route 161B Auburn Express

AM PEAK

Depart Portland Hills Terminal ~ right on Portland Street, continue on Cole Harbour Road, left on Forest Hills Parkway, right on Merrimac Drive, left on Arklow Drive, left on John Stewart Drive, right on Auburn Drive, left on Bradorian Drive, right on Auburn Drive, left on John Stewart Drive, right on Arklow Drive, right on Merrimac Drive, left on Forest Hills Parkway, right on Cole Harbour Road, continue on Portland Street, left into Portland Hills Terminal, depart Portland Hills Terminal left on Portland Street, left on Alderney Drive, right on Wyse Road, right on Thistle Street, left into Bridge Terminal, depart Bridge Terminal right on Thistle Street, right on Wyse Road, left on Macdonald Bridge, right on ramp to Barrington Street, left on Hollis Street, right on Morris Street, continue on ~ **University Avenue**

PM PEAK

Depart University Avenue ~ continue on University Avenue, continue on Morris Street, left on Lower Water Street, continue on Upper Water Street, left on Duke Street, right on Barrington Street, left on

Cogswell Street, right on Gottingen Street, right on North Street, continue on Macdonald Bridge, continue on Nantucket Avenue, right into Bridge Terminal, depart Bridge Terminal right on Thistle Street, left on Wyse Road, left on Alderney Drive, right on Portland Street, left into Penhorn Terminal, depart Penhorn Terminal left on Portland Street, right into Portland Hills Terminal, depart Portland Hills Terminal right on Portland Street, continue on Cole Harbour Road, left on Forest Hills Parkway, right on Merrimac Drive, left on Arklow Drive, left on John Stewart Drive, right on Auburn Drive, left on Bradorian Drive, right on Auburn Drive, left on John Stewart Drive, right on Arklow Drive, right on Merrimac Drive, left on Forest Hills Parkway, right on Cole Harbour Road, continue on Portland Street, left into ~ **Portland Hills Terminal**

Route 165 Caldwell Express

AM PEAK

Depart Portland Hills Terminal ~ right on Portland Street, right on Caldwell Road, left on Astral Drive, right on Sherwood Street, right on Caldwell Road, left on Portland Street, left into Portland Hills Terminal, depart Portland Hills Terminal left on Portland Street, left on Alderney Drive, right on Wyse Road, right on Thistle Street, left into Bridge Terminal, depart Bridge Terminal right on Thistle Street, right on Wyse Road, left on Macdonald Bridge, right on ramp to Barrington Street, left on Hollis Street, right on Morris Street, continue on ~ **University Avenue**

PM PEAK

Depart University Avenue ~ continue on University Avenue, continue on Morris Street, left on Lower Water Street, continue on Upper Water Street, left on Duke Street, right on Barrington Street, left on Cogswell Street, right on Gottingen Street, right on North Street, continue on Macdonald Bridge, continue on Nantucket Avenue, right into Bridge Terminal, depart Bridge Terminal right on Thistle Street, left on Wyse Road, left on Alderney Drive, right on Portland Street, left into Penhorn Terminal, depart Penhorn Terminal left on Portland Street, right into Portland Hills Terminal, depart Portland Hills Terminal right on Portland Street, right on Caldwell Road, left on Astral Drive, right on Sherwood Street, right on Caldwell Road, left on Portland Street, left into ~ **Portland Hills Terminal**

Route 168 North Preston Express

AM PEAK

Depart Portland Hills Terminal ~ right on Portland Street, continue on Cole Harbour Road, left on Otago Drive, right on Poplar Drive, right on Circassion Drive, left on Forest Hills Parkway, right on Highway 7, left on Lake Major Road, continue on North Preston Road, left on Simmonds Road, left into the North Preston Recreation Centre turning loop, depart North Preston Recreation Centre turning loop, right on Simmonds Road, right on North Preston Road, right on Cain Street, left on Clarence Street, left on Johnson Road, continue on North Preston Road, continue on Lake Major Road, right on Highway 7, left on Forest Hills Parkway, right on Circassion Drive, left on Poplar Drive, left on Otago Drive, right on Cole Harbour Road, continue on Portland Street, left into Portland Hills Terminal, depart Portland Hills Terminal left on Portland Street, left on Alderney Drive, right on Wyse Road, right on Thistle Street, left into Bridge Terminal, depart Bridge Terminal right on Thistle Street, right on Wyse Road, left on Macdonald Bridge, right on ramp to Barrington Street, left on Hollis Street, right on Morris Street, continue on ~ **University Avenue**

PM PEAK

Depart University Avenue ~ continue on University Avenue, continue on Morris Street, left on Lower Water Street, continue on Upper Water Street, left on Duke Street, right on Barrington Street, left on Cogswell Street, right on Gottingen Street, right on North Street, continue on Macdonald Bridge, continue on Nantucket Avenue, right into Bridge Terminal, depart Bridge Terminal right on Thistle Street, left on Wyse Road, left on Alderney Drive, right on Portland Street, left into Penhorn Terminal, depart Penhorn Terminal left on Portland Street, right into Portland Hills Terminal, depart Portland Hills Terminal right on Portland Street, continue on Cole Harbour Road, left on Otago Drive, right on Poplar Drive, right on

Circassion Drive, left on Forest Hills Parkway, right on Highway 7, left on Lake Major Road, continue on North Preston Road, left on Simmonds Road, left into the North Preston Recreation Centre turning loop, depart North Preston Recreation Centre turning loop, right on Simmonds Road, right on North Preston Road, right on Cain Street, left on Clarence Street, left on Johnson Road, continue on North Preston Road, continue on Lake Major Road, right on Highway 7, left on Forest Hills Parkway, right on Circassion Drive, left on Poplar Drive, left on Otago Drive, right on Cole Harbour Road, continue on Portland Street, left into ~ **Portland Hills Terminal**

Route 178 Mount Edward to Ferry Express

AM PEAK

Depart Gregory Drive ~ left on Flying Cloud Drive, right on Forest Hills Parkway, right on Flying Cloud Drive, left on Gregory Drive, left on Wildwood Boulevard, continue on Cranberry Crescent, left on Mount Edward Road, continue on Woodlawn Road, right on Portland Street, left on ramp to Circumferential Highway 111, right on Pleasant Street, left on Atlantic Street, right into ~ **Woodside Ferry Terminal**

PM PEAK

Depart Woodside Ferry Terminal ~ left on Atlantic Street, right on Pleasant Street, left on Circumferential Highway 111, right on ramp to Portland Street, left on Woodlawn Road, continue on Mount Edward Road, right on Cranberry Crescent, continue on Wildwood Boulevard, right on Gregory Drive, left on Flying Cloud Drive, right on Forest Hills Parkway, right on Flying Cloud Drive, left on ~ **Gregory Drive**

Route 179 Cole Harbour to Ferry Express

AM PEAK

Depart Cole Harbour Road ~ continue on Cole Harbour Road, right on Ashgrove Avenue, right on Colby Drive, right on Cumberland Drive, left on Cole Harbour Road, continue on Portland Street, left into Portland Hills Terminal, depart Portland Hills Terminal left on Portland Street, left on ramp to Circumferential Highway 111, right on Pleasant Street, left on Atlantic Street, right into ~ **Woodside Ferry Terminal**

PM PEAK

Depart Woodside Ferry Terminal ~ left on Atlantic Street, right on Pleasant Street, left on Circumferential Highway 111, right on exit to Portland Street, continue on Portland Street, right into Portland Hills Terminal, depart Portland Hills Terminal right on Portland Street, continue on Cole Harbour Road, right on Ashgrove Avenue, right on Colby Drive, right on ~ **Cumberland Drive**

Route 182 First Lake Express

AM PEAK

Depart Cobequid Terminal ~ left Cobequid Road, left on First Lake Drive, continue on First Lake Drive, right on Metropolitan Avenue, left on Nictaux Drive, left on Nappan Drive, left on Nictaux Drive, right on Nordic Crescent, left on Stokil Drive, left on Beaver Bank Road, left on Sackville Drive, right into Downsview parking lot, continue to Downsview Drive, continue on Walker Avenue, right into Sackville Terminal, left on Walker Avenue, continue on Downsview Drive, continue through Downsview parking lot, left on Sackville Drive, right on Beaver Bank Road, right on Stokil Drive, right on Nordic Crescent, left on Nictaux Drive, right on Nappan Drive, right on Nictaux Drive, right on Metropolitan Avenue, left on First Lake Drive, continue on First Lake Drive, right on Cobequid Road, right into Cobequid Terminal, depart Cobequid Terminal right on Cobequid Road, left on Sackville Drive, continue on Bedford Highway, left on Dartmouth Road, continue on Windmill Road, continue on Victoria Road, right on ramp to MacKay Bridge, continue on MacKay Bridge, continue left on ramp to Barrington Street, continue on Barrington Street, right on Spring Garden Road, right on Summer Street to ~ **Bell Road**

PM PEAK

Depart Summer Street ~ left on Spring Garden Road, left on Barrington Street, continue on Upper Water Street, right on Barrington Street, left on ramp to MacKay Bridge, continue on MacKay Bridge, right on Exit 2W to Bedford, continue on Windmill Road, continue left on ramp to Airport/Bedford, continue on Dartmouth Road, right on Bedford Highway, continue on Sackville Drive, right on Cobequid Road, left into Cobequid Terminal, depart Cobequid Terminal left on Cobequid Road, left on First Lake Drive, continue on First Lake Drive, right on Metropolitan Drive, left on Nictaux Drive, left on Nappan Drive, left on Nictaux Drive, right on Nordic Crescent, left on Stokil Drive, left on Beaver Bank Road, left on Sackville Drive, right into Downsview parking lot, continue to Downsview Drive, continue on Walker Avenue, right into Sackville Terminal, left on Walker Avenue, continue on Downsview Drive, continue through Downsview parking lot, left on Sackville Drive, right on Beaver Bank Road, right on Stokil Drive, right on Nordic Crescent, left on Nictaux Drive, right on Nappan Drive, right on Nictaux Drive, right on Metropolitan Avenue, left on First Lake Drive, continue on First Lake Drive, right on Cobequid Road, right into ~ **Cobequid Terminal**

Route 183 Springfield Express

AM PEAK

Depart Sackville Terminal ~ left on Walker Avenue, left on Old Sackville Road, right on Melham Drive, left on Sackville Drive, left on Springfield Avenue, continue to Springfield Avenue turning loop, depart Springfield Avenue right on Sackville Drive, right on Melham Drive, left on Old Sackville Road, right on Walker Avenue, right into Sackville Terminal, depart Sackville Terminal left on Walker Avenue, left on Old Sackville Road, left on Beaver Bank Connector, continue on Highway 101, right on Exit 1F to Dartmouth, continue on the Bedford Bypass, continue on Windmill Road, continue on Victoria Road, right on ramp to MacKay Bridge, continue on MacKay Bridge, continue left to Barrington Street, continue on Barrington Street, right on Spring Garden Road, right on Summer Street to ~ **Bell Road**

PM PEAK

Depart Summer Street ~ left on Spring Garden Road, left on Barrington Street, continue on Upper Water Street, right on Barrington Street, left on ramp to MacKay Bridge, continue on MacKay Bridge, right on Exit 2W to Bedford, continue on Windmill Road, continue on the Bedford Bypass, continue on Highway 101, right on Exit 2 to Beaver Bank Road, continue on Beaver Bank Connector, right on Old Sackville Road, right on Walker Avenue, right into Sackville Terminal, depart Sackville Terminal left on Walker Avenue, left on Old Sackville Road, right on Melham Drive, left on Sackville Drive, left on Springfield Avenue, continue to Springfield Avenue turning loop, depart Springfield Avenue right on Sackville Drive, right on Melham Drive, left on Old Sackville Road, right on Walker Avenue, right into ~ **Sackville Terminal**

Route 185 Millwood Express

AM PEAK

Depart Sackville Terminal ~ left on Walker Avenue, continue on Downsview Drive, continue through Downsview parking lot, left on Sackville Drive, right on Millwood Drive, left on Jackladder Drive, right on Rossing Drive, left on Millwood Drive, right on Beaver Bank Cross Road, left on Sackville Drive, right into Downsview parking lot, continue to Downsview Drive, continue on Walker Avenue, right into Sackville Terminal, depart Sackville Terminal left on Walker Avenue, left on Old Sackville Road, left on Beaver Bank Connector, continue on Highway 101, right on Exit 1F to Dartmouth, continue on the Bedford Bypass, continue on Windmill Road, continue on Victoria Road, right on ramp to MacKay Bridge, continue on MacKay Bridge, continue left to Barrington Street, continue on Barrington Street, right on Spring Garden Road, right on Summer Street to ~ **Bell Road**

PM PEAK

Depart Summer Street ~ left on Spring Garden Road, left on Barrington Street, continue on Upper Water Street, right on Barrington Street, left on ramp to MacKay Bridge, continue on MacKay Bridge, right on

Exit 2W to Bedford, continue on Windmill Road, continue on the Bedford Bypass, continue on Highway 101, right on Exit 2 to Beaver Bank Road, continue on Beaver Bank Connector, right on Old Sackville Road, right on Walker Avenue, right into Sackville Terminal, depart Sackville Terminal left on Walker Avenue, continue on Downsview Drive, continue through Downsview parking lot, left on Sackville Drive, right on Millwood Drive, left on Jackladder Drive, right on Rossing Drive, left on Millwood Drive, right on Beaver Bank Cross Road, left on Sackville Drive, right into Downsview parking lot, continue to Downsview Drive, continue on Walker Avenue, right into ~ **Sackville Terminal**

Route 186 Basinview Express

AM PEAK

Depart Rockmanor Drive ~ continue on Rockmanor Drive, left on Riverview Crescent, right on Rockmanor Drive, right on Rocky Lake Drive, left on Bedford Highway, right on Meadowbrook Drive, left on Basinview Drive, right on Hammonds Plains Road, left on ramp to Highway 102 Halifax, continue on Highway 102, right on Exit 1D to Dunbrack Street, left to Dunbrack Street, right on Main Avenue, continue on Fairview Overpass, continue on Lady Hammond Road, right on Kempt Road, left on Young Street, right on Gottingen Street, left on Cogswell Street, right on Barrington Street, right on Spring Garden Road, right on Summer Street to ~ **Bell Road**

PM PEAK

Depart Summer Street ~ left on Spring Garden Road, left on Barrington Street, left on Cogswell Street, right on Gottingen Street, left on Young Street, right on Kempt Road, left on Lady Hammond Road, continue on Bedford Highway, right on ramp to Joseph Howe Drive, continue on Joseph Howe Drive, right on Dutch Village Road, right on Alma Crescent, right on Titus Street, left on Main Avenue, left on North West Arm Drive, right on ramp to Highway 102, continue on Highway 102, right on Exit 3A to Bedford, continue on Hammonds Plains Road, left on Basinview Drive, right on Meadowbrook Drive, left on Bedford Highway, right on Rocky Lake Drive, left on Rockmanor Drive, left on Riverview Crescent, right on ~ **Rockmanor Drive**

Route 189 Beaver Bank Express

AM PEAK

Depart Sackville Terminal ~ left on Walker Avenue, continue on Downsview Drive, continue through Downsview parking lot, left on Sackville Drive, right on Beaver Bank Road, continue on Beaver Bank Road, right into Kinsac Community Centre, depart Kinsac Community Centre left on Beaver Bank Road, continue on Beaver Bank Road, left on Sackville Drive, right into Downsview parking lot, continue to Downsview Drive, continue on Walker Avenue, right into Sackville Terminal, depart Sackville Terminal left on Walker Avenue, left on Old Sackville Road, left on Beaver Bank Connector, continue on Highway 101, right on Exit 1F to Dartmouth, continue on the Bedford Bypass, continue on Windmill Road, continue on Victoria Road, right on ramp to MacKay Bridge, continue on MacKay Bridge, continue left to Barrington Street, continue on Barrington Street, right on Spring Garden Road, right on Summer Street to ~ **Bell Road**

PM PEAK

Depart Summer Street ~ left on Spring Garden Road, left on Barrington Street, continue on Upper Water Street, right on Barrington Street, left on ramp to MacKay Bridge, continue on MacKay Bridge, right on Exit 2W to Bedford, continue on Windmill Road, continue on the Bedford Bypass, continue on Highway 101, right on Exit 2 to Beaver Bank Road, continue on Beaver Bank Connector, right on Old Sackville Road, right on Walker Avenue, right into Sackville Terminal, depart Sackville Terminal left on Walker Avenue, continue on Downsview Drive, continue through Downsview parking lot, left on Sackville Drive, right on Beaver Bank Road, continue on Beaver Bank Road, right into Kinsac Community Centre, depart Kinsac Community Centre left on Beaver Bank Road, continue on Beaver Bank Road, left on Sackville Drive, right into Downsview parking lot, continue to Downsview Drive, continue on Walker Avenue, right into ~ **Sackville Terminal**

Route 192 Southgate Express

AM PEAK

Depart Larry Uteck Boulevard at Starboard Drive ~ continue on Larry Uteck Boulevard, left on Southgate Drive, left on Bedford Highway, left on Nelsons Landing Boulevard, right on Amin Street, left on Moirs Mill Road, left on Royal Masts Way, right on Oveanview Drive, left on Nine Mile Drive, right on Larry Uteck Boulevard, continue on Larry Uteck Boulevard West, exit roundabout on ramp to Highway 102 South to Halifax, continue on Highway 102, right on Exit 1D to Dunbrack Street, left to Dunbrack Street, right on Main Avenue, continue on Fairview Overpass, continue on Lady Hammond Road, right on Kempt Road, left on Young Street, right on Gottingen Street, left on Cogswell Street, right on Barrington Street, right on Spring Garden Road, right on Summer Street to ~ **Bell Road**

PM PEAK

Depart Summer Street ~ left on Spring Garden Road, left on Barrington Street, left on Cogswell Street, right on Gottingen Street, left on Young Street, right on Kempt Road, left on Lady Hammond Road, continue on Bedford Highway, right on ramp to Joseph Howe Drive, continue on Joseph Howe Drive, right on Dutch Village Road, right on Alma Crescent, right on Titus Street, left on Main Avenue, left on North West Arm Drive, right on ramp to Highway 102, continue on Highway 102, right on Exit 2B to Larry Uteck Boulevard, right on Larry Uteck Boulevard, left on Southgate Drive, left on Bedford Highway, left on Nelsons Landing Boulevard, right on Amin Street, left on Moirs Mill Road, left on Royal Masts Way, right on Oveanview Drive, left on Nine Mile Drive to ~ **Larry Uteck Boulevard**

Route 194 Bedford West Express

AM PEAK

Depart West Bedford Park & Ride ~ left on Innovation Drive, left on Gary Martin Drive, right on Broad Street, left on Larry Uteck Boulevard, right on ramp to Highway 102 South to Halifax, continue on Highway 102, right on Exit 1D to Dunbrack Street, left to Dunbrack Street, right on Main Avenue, continue on Fairview Overpass, continue on Lady Hammond Road, right on Kempt Road, left on Young Street, right on Gottingen Street, left on Cogswell Street, right on Barrington Street, right on Spring Garden Road right on Summer Street to ~ **Bell Road**

PM PEAK

Depart Summer Street ~ left on Spring Garden Road, left on Barrington Street, left on Cogswell Street, right on Gottingen Street, left on Young Street, right on Kempt Road, left on Lady Hammond Road, continue on Bedford Highway, right on ramp to Joseph Howe Drive, continue on Joseph Howe Drive, right on Dutch Village Road, right on Alma Crescent, right on Titus Street, left on Main Avenue, left on North West Arm Drive, right on ramp to Highway 102, continue on Highway 102, right on Exit 2B to Larry Uteck Boulevard, left to Larry Uteck Boulevard West, continue to Kearney Lake Road/Larry Uteck Boulevard West, right on Broad Street, left on Gary Martin Drive, right on Hammonds Plains Road, right on Innovation Drive, left into ~ **West Bedford Park & Ride**

Route 196 Starboard Express

AM PEAK

Depart Starboard Drive ~ continue on Starboard Drive, left on Larry Uteck Boulevard, continue to Larry Uteck Boulevard West, exit roundabout on ramp to Highway 102 South to Halifax, continue on Highway 102, right on Exit 1D to Dunbrack Street, left to Dunbrack Street, right on Main Avenue, continue on Fairview Overpass, continue on Lady Hammond Road, right on Kempt Road, left on Young Street, right on Gottingen Street, left on Cogswell Street, right on Barrington Street, right on Spring Garden Road right on Summer Street to ~ **Bell Road**

PM PEAK

Depart Summer Street ~ left on Spring Garden Road, left on Barrington Street, left on Cogswell Street, right on Gottingen Street, left on Young Street, right on Kempt Road, left on Lady Hammond Road, continue on Bedford Highway, right on ramp to Joseph Howe Drive, continue on Joseph Howe Drive, right on Dutch Village Road, right on Alma Crescent, right on Titus Street, left on Main Avenue, left on North West Arm Drive, right on ramp to Highway 102, continue on Highway 102, right on Exit 2B to Larry Uteck Boulevard, right on Larry Uteck Boulevard, right on Starboard Drive, left on Larry Uteck Boulevard to ~ **Nine Mile Drive**

Route 310 Middle Sackville Regional Express

Depart Margeson Park & Ride ~ right on Margeson Drive, exit roundabout to Highway 101 East to Halifax/Bedford, continue on Highway 101, right on Exit 1F to Dartmouth, continue on the Bedford Bypass, continue on Windmill Road, continue on Victoria Road, right on exit to MacKay Bridge, continue on MacKay Bridge, continue left to Barrington Street, continue on Barrington Street, right on Duke Street, right on ~ **Albemarle Street**

Depart Albemarle Street ~ right on Cogswell Street, continue on Barrington Street, left on ramp to MacKay Bridge, continue on MacKay Bridge, right on Exit 2W to Bedford, continue on Windmill Road, continue on the Bedford Bypass, continue on Highway 101, right on Exit 2A to Middle Sackville, left through roundabout, continue on Margeson Drive, left into ~ **Margeson Park & Ride**

Route 320 Airport / Fall River Regional Express

Depart Albemarle Street ~ right on Cogswell Street, right on Barrington Street, right on Duke Street, continue on Gottingen Street, right on North Street, continue on Macdonald Bridge, right on Wyse Road, left on Thistle Street, left into Bridge Terminal, depart Bridge Terminal right on Nantucket Avenue, left on Victoria Road, right on Woodland Avenue, continue on Highway 118, right on Exit 14 Fall River, right on Perrin Drive, right on Falls Run, right into Fall River Park & Ride, depart Fall River Park & Ride left on Falls Run, left on Perrin Drive, right on ramp to Oakfield, exit roundabout to Highway 102 Airport/Truro, continue on Highway 102, right on Exit 5A to Aero Tech Business Park, right on Aerotech Drive, left on Pratt and Whitney Drive, right on Baldwin Drive, left on Barnes Drive, continue left on Bell Boulevard, left on ~ **Silver Dart Drive**

Depart Silver Dart Drive ~ continue on Bell Boulevard, continue left to Red Wing Drive, continue on Red Wing Drive, right on Barnes Drive, right on Baldwin Drive, left on Pratt and Whitney Drive, right on Aerotech Drive, left on ramp to Highway 102 to Halifax, continue on Highway 102 keep right on Highway 102 to exit to Halifax, right on Exit 5 to Waverley, continue right on Highway 2, exit roundabout to Highway 118/Dartmouth, left on Perrin Drive, right on Falls Run, right into Fall River Park & Ride, left on Falls Run, left on Perrin Drive, left on ramp to Highway 118 to Dartmouth, continue on Highway 118, continue on Woodland Avenue, left on Victoria Road, right on Thistle Street, right into Bridge Terminal, depart Bridge Terminal right on Thistle Street, right on Wyse Road, left on Macdonald Bridge, right on ramp to Barrington Street, continue on Barrington Street, right on Duke Street, right on ~ **Albemarle Street**

Route 330 Tantallon Regional Express

Trips Servicing Tantallon only

Depart Albemarle Street ~ right on Cogswell Street, left on ramp to Barrington Street, left on North Street, right on Gottingen Street, left on Young Street, right on Kempt Road, left on Lady Hammond Road, continue on Bedford Highway, right on ramp to Joseph Howe Drive, continue on Joseph Howe Drive, right on Dutch Village Road, right on Alma Crescent, right on Titus Street, left on Main Avenue, left

on North West Arm Drive, right on ramp to Highway 102, right on Exit 1A to Peggys Cove, continue on Highway 103, right on Exit 5 to Hammonds Plains Road, right on Hammonds Plains Road, left on Westwood Boulevard, left in parking lot, continue to ~ **Hubley Centre Park & Ride**

Depart Hubley Centre Park & Ride ~ right on Hammonds Plains Road, left on ramp to Highway 103 Halifax, continue on Highway 103, right on Exit 1B to Halifax, continue on Highway 102, right on Exit 1D to Dunbrack Street, left to Dunbrack Street, right on Main Avenue, continue on Fairview Overpass, continue on Lady Hammond Road, right on Kempt Road, left on Young Street, right on Gottingen Street, left on Cogswell Street, right on Brunswick Street, left on Duke Street, left on ~ **Albemarle Street**

Trips Servicing Sheldrake Lake only

Depart Albemarle Street ~ right on Cogswell Street, left on ramp to Barrington Street, left on North Street, right on Gottingen Street, left on Young Street, right on Kempt Road, left on Lady Hammond Road, continue on Bedford Highway, right on ramp to Joseph Howe Drive, continue on Joseph Howe Drive, right on Dutch Village Road, right on Alma Crescent, right on Titus Street, left on Main Avenue, left on North West Arm Drive, right on ramp to Highway 102, right on Exit 1A to Peggys Cove, continue on Highway 103, right on Exit 4 to Hubley, right on Highway 3, right into ~ **Sheldrake Lake Park & Ride**

Depart Sheldrake Lake Park & Ride ~ left on Highway 3, left on ramp to Highway 103 Halifax, continue on Highway 103, right on Exit 1B to Halifax, continue on Highway 102, right on Exit 1D to Dunbrack Street, left to Dunbrack Street, right on Main Avenue, continue on Fairview Overpass, continue on Lady Hammond Road, right on Kempt Road, left on Young Street, right on Gottingen Street, left on Cogswell Street, right on Brunswick Street, left on Duke Street, left on ~ **Albemarle Street**

Trips Servicing both Sheldrake Lake & Tantallon

Depart Albemarle Street ~ right on Cogswell Street, left on ramp to Barrington Street, left on North Street, right on Gottingen Street, left on Young Street, right on Kempt Road, left on Lady Hammond Road, continue on Bedford Highway, right on ramp to Joseph Howe Drive, continue on Joseph Howe Drive, right on Dutch Village Road, right on Alma Crescent, right on Titus Street, left on Main Avenue, left on North West Arm Drive, right on ramp to Highway 102, right on Exit 1A to Peggys Cove, continue on Highway 103, right on Exit 4 to Hubley, right on Highway 3, right into Sheldrake Lake Park & Ride, depart Sheldrake Lake Park & Ride left on Highway 3, continue right on ramp to Highway 103, continue on Highway 103, right on Exit 5 to Hammonds Plains Road, right on Hammonds Plains Road, left on Westwood Boulevard, left in parking lot, continue to ~ **Hubley Centre Park & Ride**

Depart Hubley Centre Park & Ride ~ right on Hammonds Plains Road, left on ramp to Highway 103 Halifax, right on Exit 4 Ramp to Hubley, left on Highway 3, right into Sheldrake Lake Park & Ride, depart Sheldrake Lake Park & Ride left on Highway 3, left on ramp to Highway 103 Halifax, continue on Highway 103, right on Exit 1B to Halifax, continue on Highway 102, right on Exit 1D to Dunbrack Street, left to Dunbrack Street, right on Main Avenue, continue on Fairview Overpass, continue on Lady Hammond Road, right on Kempt Road, left on Young Street, right on Gottingen Street, left on Cogswell Street, right on Brunswick Street, left on Duke Street, left on ~ **Albemarle Street**

Route 370 Porters Lake Regional Express

Depart Albemarle Street ~ right on Cogswell Street, right on Barrington Street, right on Duke Street, continue on Gottingen Street, right on North Street, continue on Macdonald Bridge, right on Wyse Road, left on Thistle Street, left into Bridge Terminal, depart Bridge Terminal right on Nantucket Avenue, left on Victoria Road, right on Woodland Avenue, continue on Highway 118, right on Exit 11 to Highway 111/Main Street, continue on Circumferential Highway 111, continue on Main Street, continue on

Highway 7, continue on Highway 107, right on Exit 20 Porters Lake, left on William Porter Connector, right on Inspiration Drive, right into ~ **Porters Lake Park & Ride**

Depart Porters Lake Park & Ride ~ left on Inspiration Drive, left on William Porter Connector, right on exit to Highway 107 to Dartmouth, continue on Highway 107, continue on Highway 7, continue on Main Street, right on exit to Prince Albert Road, left on Braemar Drive, continue on Grahams Grove, continue on Prince Albert Road, continue on Ochterloney Street, right on Alderney Drive, right on Wyse Road, right on Thistle Street, left into Bridge Terminal, depart Bridge Terminal right on Thistle Street, right on Wyse Road, left on Macdonald Bridge, right on ramp to Barrington Street, continue on Barrington Street, right on Duke Street, right on ~ **Albemarle Street**

401 Porters Lake

Depart Portland Hills Terminal ~ right on Portland Street, continue on Cole Harbour Road, left on Ross Road, right on Highway 7, left at Exit 17 to East Preston, left on Brooks Drive, right on Upper Partridge River Road, left on Highway 7, right into Lakeview Shopping Centre parking lot, depart Lakeview Shopping Centre left on Highway 7, left on William Porter Connector, left on Inspiration Drive, right into ~ **Porters Lake Park & Ride**

Depart Porters Lake Park & Ride ~ left on Inspiration Drive, right on William Porter Connector, right on Highway 7, right into Lakeview Shopping Centre parking lot, depart Lakeview Shopping Centre left on Highway 7, right on Upper Partridge River Road, left on Brooks Drive, right on Highway 7, right to stay on Highway 7, left on Ross Road, right on Cole Harbour Road, continue on Portland Street, left into ~ **Portland Hills Terminal**

415 Purcells Cove

Depart Desmond Avenue ~ right on Bayers Road, left on Joseph Howe Drive, left on Mumford Road, right into Mumford Terminal, Leave Mumford Terminal, right on Mumford Road, right on Chebucto Road, through the Roundabout, continue to Herring Cove Road, left on Purcells Cove Road, left on second Fergusons Cove Road, right in to ~ **York Redoubt turning loop.**

Depart York Redoubt turning loop ~ left on Fergusons Cove Road, right on Purcells Cove Road, right on Herring Cove Road, through the Roundabout, continue to Chebucto Road, left on Mumford Road, left into Mumford Terminal. Leave Mumford Terminal, left on Mumford Road, right on Joseph Howe Drive, right on Scot Street, right on Desmond Avenue, continue ~ **Bayers Road Shopping Centre.**

433 Tantallon

Depart Lacewood Terminal ~ right on Lacewood Drive, left on Dunbrack Street, continue on Kearney Lake Road, left on Larry Uteck Boulevard, right on Bluewater Road, left on Hammonds Plains Road, right on Westwood Boulevard, left in parking lot, continue to ~ **Hubley Centre Park & Ride**

Depart Hubley Centre Park & Ride ~ left on Hammonds Plains Road, right on Bluewater Road, left on Larry Uteck Boulevard, right on Kearney Lake Road, continue on Dunbrack Street, right on Lacewood Drive, left into ~ **Lacewood Terminal**

School Routes

701 Halifax West

Depart Mumford Terminal ~ left on Mumford Road, right on Joseph Howe Drive, right on Bayers Road, left on Desmond Ave, left on Scot Street, right on Joseph Howe Drive, left on Dutch Village Road, left to stay on Dutch Village Road, right on Rosedale Avenue, right on Willett Street, left on Lacewood Drive, left into Lacewood Terminal, Depart Lacewood Terminal left on Lacewood Drive, left on Regency Park Drive, left on Thomas Raddall Drive, left into ~ **Halifax West High School**

Depart Halifax West High School ~ right on Thomas Raddall Drive, right on Regency Park Drive, right on Lacewood Drive, right into Lacewood Terminal, depart Lacewood Terminal right on Lacewood Drive, right on Willett Street, left on Rosedale Avenue, left on Dutch Village Road, right to stay on Dutch Village Road, right on Joseph Howe Drive, left on Scot Street, right on Desmond Avenue, right on Bayers Road, left on Joseph Howe Drive, left on Mumford Road to ~ **Mumford Terminal**

726 Citadel

Depart North Park Street roundabout ~ on Cogswell Street, continue on Quinpool Road, right on Chebucto Road, left on Mumford Road, left into Mumford Terminal, depart Mumford Terminal left on Mumford Road, left on Joseph Howe Drive, right on St. Margarets Bay Road, left on Fenwood Road, right on Stonehaven Road, right on Glenmore Avenue, left on Edgehill Road, right on Quarry Road, right on St. Margarets Bay Road, left on Joseph Howe Drive, right on Mumford Road, right on Chebucto Road, left on Quinpool Road, continue on Cogswell Street to ~ **North Park Street roundabout**

735 Clayton Park

AM

Depart Dunbrack Street ~ right on Kearney Lake Road, right on Bedford Highway, right on Flamingo Drive, left on Knightsridge Drive, left on Dunbrack Street, left on Willett Street, left on Glenforest Drive, left on Plateau Crescent, right into ~ **Clayton Park Junior High**

PM

Depart Clayton Park Junior High ~ right on Plateau Crescent, left on Clayton Park Drive, right on Dunbrack Street, right on Kearney Lake Drive, right on Bedford Highway, right on Flamingo Drive, left on Knightsridge Drive, continue to ~ **Dunbrack Street**

Appendix C: Alternative Measures of Route Productivity



Alternative Measures of Route Productivity

Through the roll out of the Halifax Transit Technology Plan, Halifax Transit will be able to gather more information than ever before on route productivity and service utilization. The utilization rate (also known as load factor) is another metric of evaluating the success of a route. This metric is a percentage calculated by dividing the number of passenger kilometers provided by each trip by the number of seat kilometers provided by each trip.

$$\frac{\text{Sum of kilometers travelled by all passengers on a trip}}{(\text{Number of seats on vehicle} \times \text{Length of trip in kilometers})} = \text{Utilization Rate}$$

This is an excellent indicator of how much of the transit service being supplied is utilized by passengers. This is a single metric that can be applied to all service types and buses of any capacity.

Productivity and Economic Measures

While using ridership as an approximation of the success of a transit route is one industry standard, this measure in itself does not capture a true picture of the route's success as it does not incorporate its financial viability. In order to provide a more complete picture of the success of a route, staff may use the following composite measures to evaluate the overall productivity of a route as compared to other routes of the same service type:

Measuring Productivity and Economic Measures

Ridership Productivity Measure	Passenger boardings per revenue hour (Corridor Routes, Local Routes, Rural Routes)	The number of average daily boardings per route, divided by the daily number of revenue hours of service. The standard is calculated as the average of all routes in each service category.
	Passenger boarding per revenue trip (Express Routes, Regional Express Routes)	This measure is appropriate to measure the success of these route types, as they may vary significantly in route length and one way travel times. This measure is defined as the number of average daily boardings divided by the number of daily revenue trips. The standard is calculated as the average of all Express Routes' passenger boardings per revenue trip
Economic Measure	Cost per passenger boarding (all service types)	The average cost of providing a route divided by the number of passenger boardings. The standard is calculated as the average of all routes in each service category.

These two measures may be evaluated for each route and indexed against the average for all routes in that service type, generating a Ridership Productivity Index and an Economic Standard Index. These two indices would be averaged to get the Combined Index, a well-rounded measure to evaluate the performance of a route type against others in that service category. The table below provides a sample output for three fictional routes:

Route Name	Ridership Productivity Measure		Economic Measure		Combined Index
	Boardings/Revenue Hour	Productivity Index ¹	Cost per Passenger	Cost Index ²	
Route A	31.41	0.98	\$1.13	0.95	0.97
Route B	33.16	1.04	\$1.04	1.11	1.07
Route C	30.71	0.96	\$0.96	0.91	0.94
Average for Route Type	31.93	1.00	\$1.07	1.00	1.00

In the above example, according to the Combined Index, overall, the route B is performing above average and Routes A and C are performing slightly below average.

This measure can be used to rank the productivity of routes in comparison to other routes in the same service type.

¹ Calculated by dividing the number of boardings per revenue hour for that route by the average number of boardings per revenue hour for the service type

² Calculated by dividing the cost per passenger for that route by the average cost per passenger for the service type

Appendix D: Frequency Guideline by Route



Corridor Routes

Service Type	Route Number	Weekday				Saturday			Sunday		
		Span		Service Frequency		Span		Frequency	Span		Frequency
		Service Start	Service End	Rush Hour (AM & PM)	Midday/Evening	Service Start	Service End	Day	Service Start	Service End	Day
Corridor Routes	1	5:00 AM	1:00 AM	5-10	10	5:00 AM	1:00 AM	15	6:00 AM	12:00 AM	15
	2	5:30 AM	1:00 AM	15-20	15-20	6:00 AM	1:00 AM	15	6:00 AM	12:00 AM	20
	3	5:00 AM	1:00 AM	15	20-30	6:00 AM	1:00 AM	30	6:00 AM	12:00 AM	30
	4	6:00 AM	1:00 AM	10-20	15-20	6:00 AM	12:00 AM	30	7:00 AM	12:00 AM	30
	5	5:00 AM	1:00 AM	15	15	6:00 AM	1:00 AM	20	6:00 AM	12:00 AM	30
	6*	5:00 AM	1:00 AM	10-15	15-20	5:00 AM	1:00 AM	30	5:00 AM	1:00 AM	30
	7	6:00 AM	1:00 AM	15	15-20	6:00 AM	12:00 AM	20	6:00 AM	12:00 AM	30
	8	5:00 AM	1:00 AM	20-30	20-30**	5:30 AM	1:00 AM	30	5:30 AM	12:00 AM	30
	9*	5:00 AM	1:00 AM	10-15	15-20	6:00 AM	12:00 AM	30	6:00 AM	12:00 AM	30
	10*	5:30 AM	1:00 AM	5-10	10-15	6:00 AM	12:00 AM	20	6:00 AM	12:00 AM	30

- * On routes with branches, combined frequency is shown. For example, all branches of the route 9 combine to have a 10 minute frequency on the section of the route shared by all branches. This is subject to detailed scheduling.
- ** A range is shown here to indicate that a route may have higher frequency in the peak direction during rush hour than in the off-peak direction, based on ridership demand.

Local Routes & Rural Routes

Service Type	Route Number	Weekday				Saturday			Sunday		
		Span		Service Frequency		Span		Frequency	Span		Frequency
		Service Start	Service End	Rush Hour (AM & PM)	Midday/Evening	Service Start	Service End	Day	Service Start	Service End	Day
Local Routes	21	5:30 AM	11:00 PM	30	60	6:00 AM	12:00 AM	30	6:30 AM	11:30 PM	60
	22	6:00 AM	12:00 AM	30	30	5:30 AM	12:00 AM	30	5:30 AM	12:00 AM	30
	24	6:00 AM	12:00 AM	30	30	6:00 AM	12:00 AM	30	6:00 AM	12:00 AM	30
	25	6:00 AM	11:00 PM	30	60	7:00 AM	11:00 PM	60	8:00 AM	10:00 PM	60
	26	Peak Only		30	0	No Service			No Service		
	29	6:00 AM	12:00 AM	15	30	6:00 AM	12:00 AM	30	6:30 AM	12:00 AM	30
	31	6:00 AM	12:00 AM	30	30	7:00 AM	12:00 AM	30	7:00 AM	11:00 PM	60
	32	6:00 AM	11:00 PM	30	30	6:00 AM	11:00 PM	30	6:00 AM	10:00 PM	60
	34	6:00 AM	11:00 PM	30	30	6:00 AM	11:00 PM	30	6:00 AM	11:00 PM	60
	50	Peak Only		20	0	No Service			No Service		
	51	6:00 AM	12:00 AM	30	30	6:30 AM	11:00 PM	30	7:00 AM	11:00 PM	60
	53	5:30 AM	12:00 AM	30	30	6:00 AM	12:00 AM	30	7:00 AM	11:00 PM	60
	54	6:00 AM	10:00 PM	30	60	6:00 AM	11:00 PM	60	8:00 AM	10:00 PM	60
	55	6:00 AM	10:00 PM	30	60	7:00 AM	10:00 PM	60	7:00 AM	10:00 PM	60
	56	6:00 AM	12:00 AM	30	30	6:00 AM	12:00 AM	30	7:00 AM	11:00 PM	30
	57	Peak Only		30	0	No Service			No Service		
	58	6:00 AM	11:00 PM	30	60	6:00 AM	11:00 PM	60	7:00 AM	11:00 PM	60
	59*	5:30 AM	12:00 AM	20	60	6:00 AM	12:00 AM	60	7:00 AM	11:00 PM	60
	61*	6:00 AM	12:00 AM	15	60	6:00 AM	12:00 AM	60	7:00 AM	11:00 PM	60
	62	6:00 AM	11:00 PM	30	60	7:00 AM	11:00 PM	60	7:00 AM	11:00 PM	60
	63	6:00 AM	11:00 PM	30	60	7:00 AM	11:00 PM	60	7:00 AM	10:00 PM	60
	64	6:00 AM	8:00 PM	15	60	No Service			No Service		
	65*	5:30 AM	11:00 PM	30	60	6:00 AM	11:00 PM	60	6:00 AM	11:00 PM	60
	67	6:00 AM	11:00 PM	30	60	7:00 AM	11:00 PM	60	7:00 AM	11:00 PM	60
	68*	5:00 AM	11:00 PM	30	60	6:00 AM	12:00 AM	60	7:00 AM	11:00 PM	60
	72	6:00 AM	12:00 AM	30	30	6:30 AM	12:00 AM	30	7:00 AM	11:00 PM	60
	82*	6:00 AM	11:00 PM	15	60	7:00 AM	11:00 PM	60	6:00 AM	10:00 PM	60
	83*	6:00 AM	10:00 PM	30	60	7:00 AM	11:00 PM	60	6:00 AM	10:00 PM	60
	84	5:00 AM	12:00 AM	15	30	7:00 AM	11:00 PM	60	7:00 AM	11:00 PM	60
	85*	6:00 AM	10:00 PM	30	60	7:00 AM	11:00 PM	60	6:00 AM	10:00 PM	60
	87	6:00 AM	12:00 AM	30	30	6:00 AM	11:00 PM	30	6:00 AM	11:00 PM	60
	88	6:00 AM	10:00 PM	60	60	7:00 AM	11:00 PM	60	7:00 AM	10:00 PM	60
89*	6:00 AM	10:00 PM	30	60	7:00 AM	11:00 PM	60	8:00 AM	10:00 PM	60	
90	5:30 AM	12:00 AM	30	30	6:00 AM	12:00 AM	30	6:00 AM	11:00 PM	60	
91	6:00 AM	6:00 AM	30	60	7:00 AM	11:00 PM	60	8:00 AM	10:00 PM	60	
93	Peak Only		30	0	No Service			No Service			
Rural Routes	401	7 Trips Per Day				No Service			No Service		
	415	Peak Only		60	0	No Service			No Service		
	433	Peak Only		60	0	No Service			No Service		

* This route is replaced by an Express Route at peak. Service is provided along the Local Route at the headway described above.

Regional Express Routes

Service Type	Route Number	Weekday				Weekends		
		Span		Service Frequency		Span		Frequency
		Service Start	Service End	Rush Hour (AM & PM)	Midday/ Evening	Service Start	Service End	Day
Regional Express Routes	310	Peak Only		30	2-3 off peak trips	No Service		
	320	4:30 AM	12:00 AM	30	30-60	4:30 AM	12:00 AM	60
	330	Peak Only		10-30	2-3 off peak trips	No Service		
	370	Peak Only		30	2-3 off peak trips	No Service		

Express Routes & School Routes

Service Type	Route Number	AM Peak			PM Peak		
		Span		Service Frequency	Span		Service Frequency
		Service Start	Service End	Rush Hour (AM & PM)	Service Start	Service End	Rush Hour (AM & PM)
Express Routes	123	6:00 AM	9:00 AM	30	3:00 PM	6:30 PM	30
	127	6:00 AM	8:00 AM	15	3:00 PM	5:30 PM	15
	138	6:15 AM	8:15 AM	15	3:00 PM	6:00 PM	15
	135	6:15 AM	8:15 AM	15	3:00 PM	6:30 PM	15
	136	6:15 AM	8:15 AM	20	3:00 PM	6:30 PM	20
	137	6:15 AM	8:15 AM	20	3:00 PM	6:30 PM	20
	158	6:30 AM	8:30 AM	30	3:00 PM	5:00 PM	30
	159	5:30 AM	8:30 AM	20	3:00 PM	6:00 PM	20
	161*	6:00 AM	9:00 AM	15	3:00 PM	6:00 PM	15
	165	5:30 AM	8:30 AM	30	3:00 PM	6:00 PM	30
	168	6:00 AM	9:00 AM	30	3:00 PM	6:00 PM	30
	182	6:00 AM	9:00 AM	15	3:00 PM	6:30 PM	15
	183	6:00 AM	9:00 AM	30	3:00 PM	6:30 PM	30
	185	6:00 AM	9:00 AM	15	3:00 PM	6:30 PM	15
	186	6:00 AM	8:00 AM	30	3:00 PM	5:30 PM	30
	189	6:00 AM	9:00 AM	30	3:00 PM	6:00 PM	30
	192	6:30 AM	8:30 AM	30	3:00 PM	6:00 PM	30
	194	7:00 AM	9:00 AM	30	4:00 PM	6:30 PM	30
196	6:30 AM	8:30 AM	30	3:00 PM	5:00 PM	30	
179	6:00 AM	9:00 AM	30	3:00 PM	6:30 PM	30	
178	6:00 AM	9:00 AM	30	3:00 PM	6:30 PM	30	
School Routes	701	One Trip in AM, one Trip in PM					
	726	One Trip PM					
	735	One Trip in AM, one Trip in PM					

* On routes with branches, combined frequency is shown. For example, all branches of the route 161 combine to have a 15 minute frequency on the section of the route shared by all branches. This is subject to detailed scheduling.

Appendix E: Cost/Benefit Analysis of Transit Priority Measures



Understanding the Benefits and Trade-Offs: A Cost-Benefit Analysis of Transit Investment

Determining the costs and benefits of a project like a Transit Priority Measure (TPM) is crucial for its evaluation, as well as for planning purposes. This type of analysis ensures that all factors and impacts are assessed and understood before any action is taken.

Although the cost to build a project can be relatively easy to quantify, measuring the benefits and trade-offs of a TPM is often more challenging.

The following methodology will help Halifax Transit staff, Regional Council, and Halifax residents gain a better understanding of the costs, trade-offs and benefits of any TPM being considered, large or small:

Step 1: Develop Estimates for the Capital Cost of the Project: Some TPMs being considered may have very little cost (for example installation of a regulatory sign), whereas others may require significant capital cost. Once preliminary designs are completed for any measure, the cost of any geometric changes can be calculated, including curb, asphalt, sod, traffic signals, pavement markings or any other features.

Step 2: Develop Estimates for Annual Operating Cost (if applicable): Some TPMs may have negligible operating cost, however, many TPMs have some ongoing operating costs from year to year which need to be incorporated into the cost analysis (for example the annual cost to operate traffic signals required by transit). Estimates are typically based on the approximate annual operating costs for the particular TPM using historical costs for similar measures.

Step 3: Develop operational cost savings to Halifax Transit: Using running time data collected onboard Halifax Transit vehicles, we can calculate the average delay per bus experienced today without the Transit Priority Measure, and an average cost per hour for the transit vehicle and driver. To the extent that a given TPM would eliminate this delay, this data allows us to determine how much it costs for buses to operate in mixed traffic at the location being considered for a TPM. The calculation would look like this:

Daily Cost Savings to Transit

= Average Delay/Transit Vehicle x # Transit Vehicles x Cost/hour for Transit Vehicle

Annual Cost Savings to Transit = Daily Cost Savings to Transit x Days/Year TPM is in Use

Step 4: Understand TPM’s Impact to All Road Users: When considering the introduction of any TPM, it is very important to understand the impact on all people using that particular intersection or corridor. For this we look at the “Net Road User Delay” which captures the benefit to transit users (i.e. time saved by transit users due to the TPM) and the benefit or disbenefit experienced by other road users, whether motorists, cyclists or pedestrians. This calculation would look like this:

Net Road User Delay = Net Transit User Delay + Net Non Transit User Delay

Where:

Net Transit User Delay
 = Delay/Transit Vehicle x # Transit Vehicles x Average Ridership per Transit Vehicle

And,

Net Non Transit User Delay
 = Delay/(Non Transit Vehicle x # Non Transit Vehicles x Average Vehicle Occupancy

Note: Delay reductions will be a negative value while delay increases will be a positive value.

In some cases, TPMs could have the impact of delaying the movement of personal vehicles, while in other cases, removing the buses from mixed traffic could actually mean that other cars on the road can get through an intersection or corridor faster.

Step 5: Determine the Payback Period for the TPM: Once the costs and benefits are calculated, the payback periods can be determined. A Total Payback Period, which considers not only the costs to Halifax Transit, but also the cost to all road users including car commuters, can be calculated using the following equation:

Total Payback Period	$= \frac{\text{TPM Capital Cost}}{\text{Annual Cost Savings to Transit} + \text{Annual Cost Savings to Public} - \text{Annual Operating Cost}}$
----------------------	---

Example TPM Cost Benefit Calculation

Let us assume that the construction of a new Transit Signal Phase is being considered at an intersection to reduce the amount of delay experienced by buses travelling northbound on 2nd Avenue. This phase would only operate during afternoon rush hour (for a total of 2 hours per day).

Traffic modeling found that the time savings per bus is 15 seconds, while the delay increase per private vehicle is 3 seconds. There are 20 transit vehicles and 1,000 non-transit vehicles which use the road network in this area in the peak two hour period. Average transit ridership is 30 passengers per bus, while the average vehicle occupancy is 1.22¹ people per non-transit vehicle.

Given

- 15 seconds of savings per bus
- 20 buses in peak period
- 3 seconds of increased delay per non-transit vehicle
- 1000 non transit vehicles during peak period
- 260 weekdays per year
- Initial capital cost for construction \$6,500
- Annual Operating Cost \$200
- Transit hourly rate for vehicle and driver: \$65.14/hr
- Average hourly rate for commuters (transit and non-transit users): \$21.92²

Since we are provided with Capital and Operating costs above, we skip ahead to *Step 3: Develop operational cost savings to Halifax Transit.*

Daily Cost Savings to Transit

= Average Delay/Transit Vehicle x # Transit Vehicles x Cost/hour for Transit Vehicle

$$\text{Daily Cost Savings to Transit} = \frac{-15s / \text{veh} \times 20\text{veh} \times \$65.14}{3,600 \text{ seconds/hour}}$$

$$\text{Daily Cost Savings to Transit} = -\$5.43/\text{day}$$

$$\text{Annual Cost Savings to Transit} = -\frac{\$5.43}{\text{day}} \times 260 \text{ weekdays}$$

$$\text{Annual Cost Savings to Transit} = \$1,411.37$$

Next, we move on to *Step 4: Understand TPM's Impact to All Road Users.* First, we have to understand how much delay or time savings transit users and other road users will have with the new TPM. From here, we can calculate how much money is saved by looking at the annual change in cost to the public:

Net Transit User Delay = Delay/Transit Vehicle x # Transit Vehicles x Average Ridership per Transit Vehicle

$$\text{Net Transit User Delay} = -15s/\text{Transit Vehicle} \times 20 \text{ vehicles} \times 30 \text{ users}$$

¹ This value was collected by HRM Strategic Transportation Planning, collected over several years via screenline counts throughout Halifax.

² This rate was extracted from Statistics Canada for Nova Scotia from September 2015

$$\text{Net Transit User Delay} = -9,000 \text{ user seconds}$$

When the delay experienced by private vehicles is less than 5s per vehicle, this delay will not be noticed by users, and is considered negligible:

$$\text{Net Non Transit User Delay} = \text{Delay/ Vehicle} \times \# \text{ Non Transit Vehicles} \times \text{Average Vehicle Occupancy}$$

$$\text{Net Non Transit User Delay} = 0s \times 1000 \text{ vehicles} \times 1.22 \text{ users per vehicle}$$

$$\text{Net Non Transit User Delay} = 0s$$

Overall, there's a net savings in the road network of -9,000 seconds per day

$$\text{Daily Change in Cost to Public} = - \frac{-9000 \text{ seconds per day} \times \$21.92 \text{ per hour}}{3600 \text{ seconds per hour}}$$

$$\text{Daily Change in Cost to Public} = -\$54.80$$

$$\text{Annual Change in Cost to Public} = -\$54.80 \times 260 \text{ weekdays}$$

$$\text{Annual Change in Cost to Public} = -\$14,248.00$$

That's a cost savings to the public of \$14,248 per year

Finally, we can look at *Step 5: Determine the Payback Period for the TPM*:

$$\text{Payback Period} = \frac{\text{TPM Capital Cost}}{\text{Annual Cost Savings to Transit} + \text{Annual Cost Savings to Public} - \text{Annual Operating Cost}}$$

$$\text{Payback Period} = \frac{\$6,500}{(\$1,411.37) + (\$14,248.00) - \$200}$$

$$\text{Payback Period} = 0.42 \text{ years}$$

2016-17
Annual Service Plan

HALIFAX
TRANSIT



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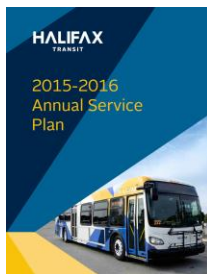
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Summary

This Annual Service Plan (ASP) outlines service adjustments planned for 2016-17, pending Regional Council's approval of the *Moving Forward Together Plan*.

Highlights for the upcoming year will include:

- Launching of a third new Harbour Ferry;
- Service changes to the existing Route 56 and 330;
- The launch of new technologies to improve the customer experience, including public interfaces for real time data and stop annunciation; and
- The replacement of 35 older conventional transit and MetroX buses, following this replacement 100% of transit vehicles will be accessible.



This document also includes a review of transit service in 2015-16. The 2015-16 Annual Service Plan was approved by Regional Council in 2015 as part of the annual budget process.

Last year's Annual Service Plan can be viewed in its entirety at:

www.halifax.ca/transit/_assets/documents/AnnualServicePlan2015-16_Web.pdf

Halifax Transit will have delivered approximately 970,000 scheduled service hours in 2015-16, including 878,500 hours of fixed-route bus service, 15,000 hours of ferry service, and 76,500 hours of Access-A-Bus Service.

Highlights from the past year include:

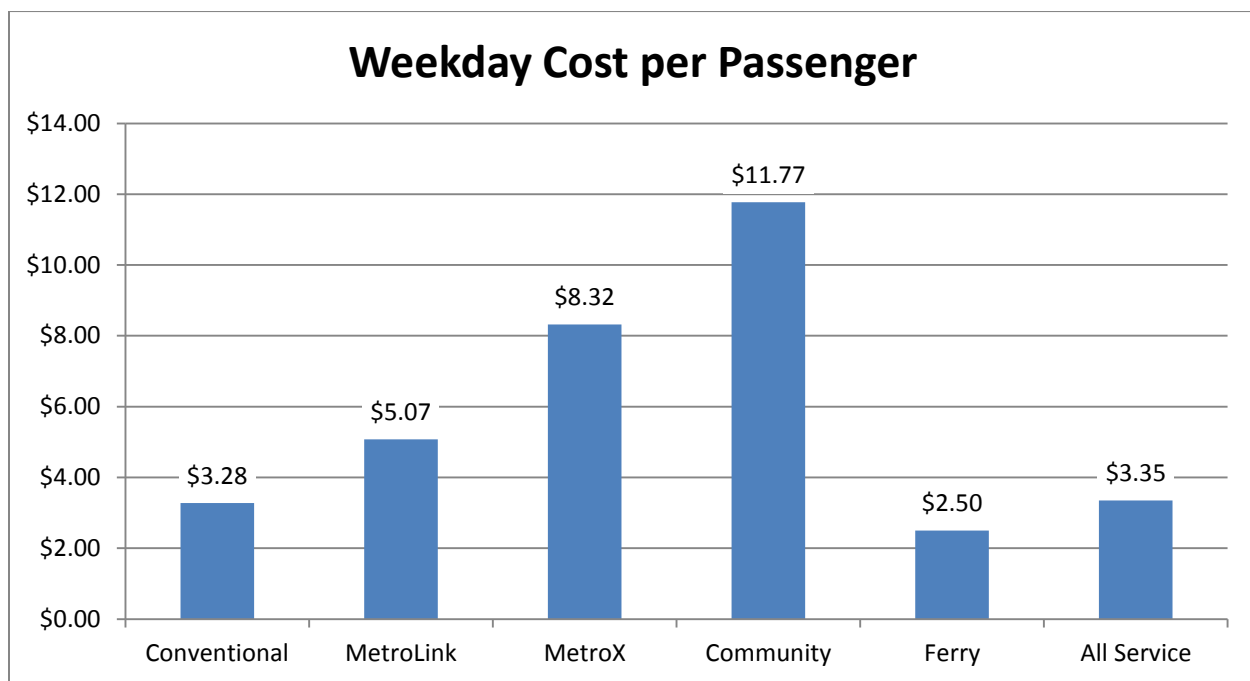
- Opening of the new Lacewood Transit Terminal;
- Launching of the new Harbour Ferry Craig Blake, allowing increased ferry service;
- Macdonald Bridge redecking, requiring a shuttle service during scheduled closures, and detours during unscheduled closures;
- Ferry ridership has increased approximately 26%, in part due to the bridge redecking project and increased ferry service; and
- Routes 80 Sackville, 81 Hemlock Ravine, 82 Millwood and 83 Springfield now provide Accessible Low Floor (ALF) service. 76% of Halifax Transit routes now provide ALF service.

Key Performance Indicators (KPI)

Below are several measures used in the transit industry to measure effectiveness and efficiency.

KPI	Division	14/15	15/16	% Change
Service Utilization (Passengers per Capita)	Bus & Ferry	62.70	62.40	-0.5%
Service Utilization (Passengers per Service Hour)	Bus & Ferry	24.81	24.41	-1.6%
Amount of Service (Service Hours per Capita)	Bus & Ferry	2.53	2.56	+1.1%
Cost Effectiveness (Operating Expense per Passenger)	Bus & Ferry	\$4.66	\$4.45	-4.5%
Average Fare (Passenger Revenue per Passenger)	Bus & Ferry	\$1.72	\$1.80	+4.8%
Financial (Cost Recovery)	Bus & Ferry	37%	40%	+8.9%
Financial (Cost Recovery)	All	35%	38%	+8.3%
Customer Service (Requests addressed within standard)	All	94%	97%	+3.2%

Weekday Cost per Passenger



Note: At the time of printing, year-end figures are not available for 2015-16. All figures in the document for 2015-16 are projections based on information to the end of December 2015.

The cover features a large graphic on the left side composed of several overlapping geometric shapes in shades of blue and yellow. The top-left portion is a dark blue triangle. Below it is a lighter blue triangle. At the bottom-left is a yellow triangle. The text is positioned on the dark blue triangle.

Proposed Service Adjustments 2016-17

HALIFAX
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Proposed Service Adjustments 2016-17

Halifax Transit is receiving 35 replacement conventional vehicles in 2016-17. Expansion buses received in 2015-16 continue to be utilized to provide shuttle service during the Macdonald Bridge Big Lift project. A new harbour ferry is scheduled to begin service in July 2016; this will be the third new ferry received in as many years and will allow the retirement of one of the older vessels built in 1978. Pending Council's approval of the *Moving Forward Together Plan* (MFTP), there would be several service changes proposed for 2016-17 as described below.

Accessible Low Floor (ALF)

As part of service improvements the Route 20 Herring Cove will begin providing ALF service.

By the end of fiscal year 2016-17 all Halifax Transit buses will be wheelchair accessible, therefore all routes will become accessible. A number of bus stops will remain non-accessible, these are listed in the Accessible Transit Service Handbook as non-accessible (no ramp) bus stops. Halifax Transit will continue working towards an increasingly accessible transit network through the annual infrastructure program.

Service Adjustments

Pending Regional Council approval of the *Moving Forward Together Plan* the following changes would take place in 2016-17.

	Rt	Adjustment	Annual Hours	Annual Cost
	56	Service removed from Portland Hills/Penhorn, extended to Bridge	0	(\$30,500)
	330	One additional AM peak and PM peak trip to and from Tantallon	630	\$55,400
		Bus Total	630	\$24,900
AAB				
	AAB*	Two expansion Access-A-Bus buses	4,360	\$265,100
		AAB Total	4,360	\$265,100
Grand Total			4,990	\$290,000

**Access-A-Bus service changes are not part of the MFTP scope and are considered separately.*

Note: The cost associated with bus service adjustments will be absorbed by the five expansion service vehicles from fiscal 2015-16. Route 56 cost savings are attributable to lower kilometres of the new routing.

Conventional

Route 56 Dartmouth Crossing

- Will no longer provide service to Penhorn Terminal or Portland Hills Terminal.
- Route will service the Bridge Terminal and travel via Thistle Street and Crichton Street to MicMac Terminal, continuing on to Dartmouth Crossing.
- Routing will be adjusted in Dartmouth Crossing to provide two-way service along Countryview Drive (See map in Appendix B).

- Will provide service every 30 minutes from 6am until midnight on Weekdays and Saturdays.
- Will provide service on Sundays every 30 minutes from 7am to 6pm and then every 60 minutes until 11pm.

MetroX

Route 330 Tantallon

- One additional AM Peak inbound trip from Tantallon to Downtown Halifax and one PM Peak outbound trip from Downtown Halifax to Tantallon will be introduced to expand service and mitigate overloads.

Access-A-Bus

- Two new expansion buses will be added to the Access-A-Bus fleet.



Projects and
Infrastructure
2016–2017

HALIFAX
TRANSIT

Projects and Infrastructure 2016-17

Moving Forward Together Plan

In April 2013, Halifax Transit initiated the development of a Five Year Service Plan. As part of the planning process, a number of public engagement activities took place. The results of the consultation were used to develop the Moving Forward Principles, the foundation on which the plan is designed.

These are intended to be general, values based statements to help direct the development of the plan, and also to provide guidance to decision making over the life of the plan.

These principles are:

1. Increase the proportion of resources allocated towards high ridership services.
2. Build a simplified transfer based system.
3. Invest in service quality and reliability.
4. Give transit increased priority in the transportation network.

In order to ensure that the transit network best meets the intent of the Moving Forward Principles, Regional Council approved an expansion in the initial scope of work proposed as part of the *Moving Forward Together Plan* to include a comprehensive review of the entire transit network.

In April of 2015, Halifax Transit concluded the largest consultation program ever undertaken in HRM on the draft *Moving Forward Together Plan*. The draft plan, developed on the four Moving Forward Principles, is currently under revision by Halifax Transit staff and will be before the Transportation Standing Committee for consideration in March 2016. If approved, the first stages of implementation of this plan could take place in 2016-17 fiscal year.

Burnside Transit Centre Study

This project was initiated in 2015-16, and work will continue into 2016-17. A new or expanded fleet maintenance and storage facility is required to accommodate fleet growth and transit service increases. In early 2016, a study will be commissioned to investigate the feasibility of expanding the existing Burnside Transit Centre facility. The study will include a thorough transit centre program needs assessment, land capability analysis, and the preparation of an opportunities and constraints concept with class D cost estimates.

Woodside Ferry Terminal Upgrades

Structural and environmental assessments on the Woodside Ferry Terminal began in 2015-16 to inform the work plan for this multi-year project. In 2016-17, detailed design of the building renovations will take place, as well as a site capability analysis. Once the design is complete, Phase 1 construction for the building renovation is anticipated for the 2017-18 budget year.

Halifax Ferry Terminal

This project was initiated in 2015-16, and work will continue into 2016-17. The Halifax Ferry Terminal was constructed in 1978, and while basic planned and corrective maintenance activities have been undertaken regularly since construction, the terminal is in need of a significant cosmetic upgrade in

order to improve the customer experience and enhance the corporate image. Refresh work could potentially include a new security desk, interior lighting, a consolidated barrier free entranceway, improved wayfinding and regulatory signage, washroom improvements and transit information technology all to improve the customer experience.

Transit Technology Roadmap

Halifax Transit continues to make great progress implementing the Trapeze Transit Master CAD/AVL (Computer Aided Dispatch / Automated Vehicle Location) solution. Bus technology installs continue with an expected completion of summer 2016. Following vehicle technology installs, the project will focus on new public interface delivery including web and mobile transit tools, as well as stop announcement. Additional projects scheduled for 2016-17 include a bus driving simulator, enhanced ferry security network and solution selection for fixed route scheduling and farebox.

Shelters and Accessible Pads

Halifax Transit plans to install approximately 10 new expansion and replacement shelters throughout the system in 2016-17, as well as approximately 50-60 new and replacement concrete landing pads to improve accessibility and reduce the number of stops where the ramp cannot be deployed.

The background features a large, abstract geometric design. It consists of several overlapping triangular and quadrilateral shapes in various shades of blue (from light to dark) and a bright yellow. The shapes are arranged in a way that creates a sense of depth and movement, with some shapes appearing to recede into the background while others come forward.

Review of 2015-16

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Review of 2015-16

In March 2015 the Macdonald Bridge began a redecking project, causing regular evening closures and occasional weekend closures of the Macdonald Bridge. During this time Halifax Transit has operated a shuttle service across the MacKay Bridge and increased harbour crossings on the Alderney – Halifax Ferry Route. While the Big Lift project has had a negative effect on bus ridership, overall ferry ridership has grown approximately 26% over the past year, in part due to increased service. There is not currently a confirmed end date for this project.

In August 2015 Halifax Transit opened the new Lacewood Terminal, located next to the Canada Games Centre on Lacewood Drive. This new terminal is a significant upgrade and includes 14 individual bus bays, indoor passenger waiting areas, public washrooms and many accessibility features. Several route and schedule adjustments were also required to service the new terminal.



In September 2015 Halifax Transit introduced the new Craig Blake Harbour Ferry, named in honour of Petty Officer Second Class Craig Blake. The new vessel is the second added to the fleet in as many years after the Christopher Stannix was introduced in 2014. This increases the total ferry fleet to five, and has allowed for increased service on the Alderney-Halifax route as well as reducing service interruptions due to routine maintenance.



Accessible Low Floor (ALF)

As part of service improvements the following routes began providing ALF service:

- Route 80 Sackville
- Route 81 Hemlock Ravine
- Route 82 Millwood
- Route 83 Springfield

Service Adjustments

Conventional

Macdonald Bridge Closure Shuttles

- A shuttle service is being operated via the MacKay Bridge during scheduled Macdonald Bridge closures.
- This shuttle service is operated via the Macdonald Bridge when scheduled Macdonald Bridge closures are cancelled.
- During unscheduled closures routes crossing the harbour are being detoured to use the MacKay Bridge.

Lacewood Terminal Replacement

The new Lacewood Terminal opened in August 2015; routing and schedule adjustments were required to service the new terminal, located on Lacewood Drive opposite Radcliffe Drive.

- **Route 2 Wedgewood** – now travels along Radcliffe Drive and Lacewood Drive in either direction to access the new terminal.
- **Route 4 Rosedale** –has been removed from Radcliffe Drive and Dunbrack Street between Lacewood Drive and Farnham Gate Road. This provides two-way service along Parkland Drive and Farnham Gate Road.
- **Route 16 Parkland** - route start/end point moved to the new terminal.
- **Route 17 Saint Mary's** – route start/end point moved to the new terminal.
- **Route 18 Universities** – route start/end point moved to the new terminal.
- **Route 21 Timberlea** – now accesses the new terminal, off-peak service route start/end point moved to the new terminal.
- **Route 31 Main Express** – route start/end point moved to the new terminal.
- **Route 33 Tantallon Express** – now travels along Radcliffe Drive and Lacewood Drive in either direction to access the new terminal.
- **Route 34 Glenbourne Express** – now travels along Radcliffe Drive and Lacewood Drive in either direction to access the new terminal.
- **Route 35 Parkland Express** – route start/end point moved to the new terminal.
- **Route 42 Dalhousie** – route start/end point moved to the new terminal.
- **Route 52 Crosstown** – accesses the new terminal.
- **Route 89 Bedford** – route start/end point moved to the new terminal.

Ferry

Alderney Ferry

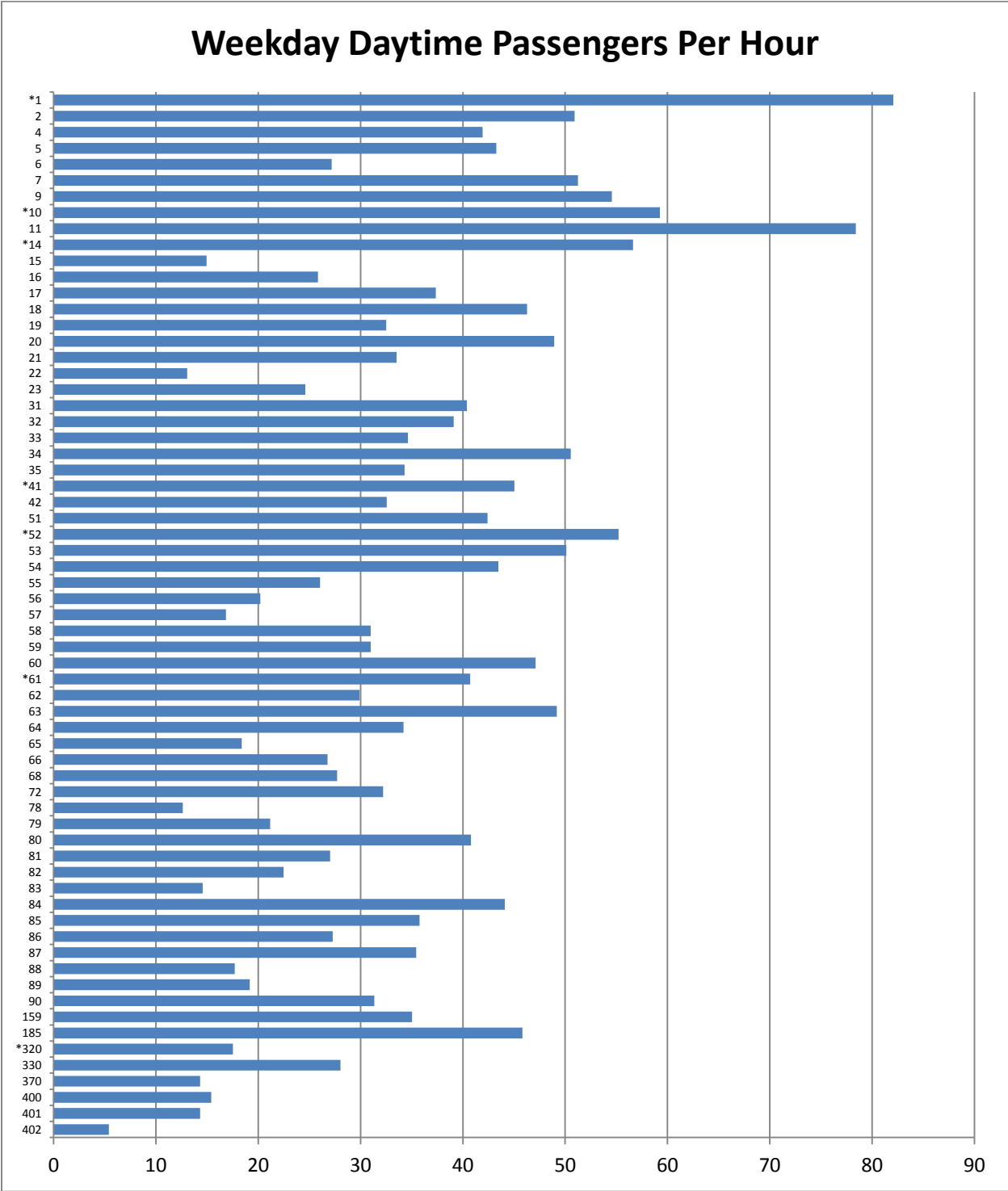
- Additional service to coincide with the closure of the Macdonald Bridge.
- Weekday service frequency increased to every 15 minutes until the end of service day.
- Sunday service extended from 6:30am until midnight.

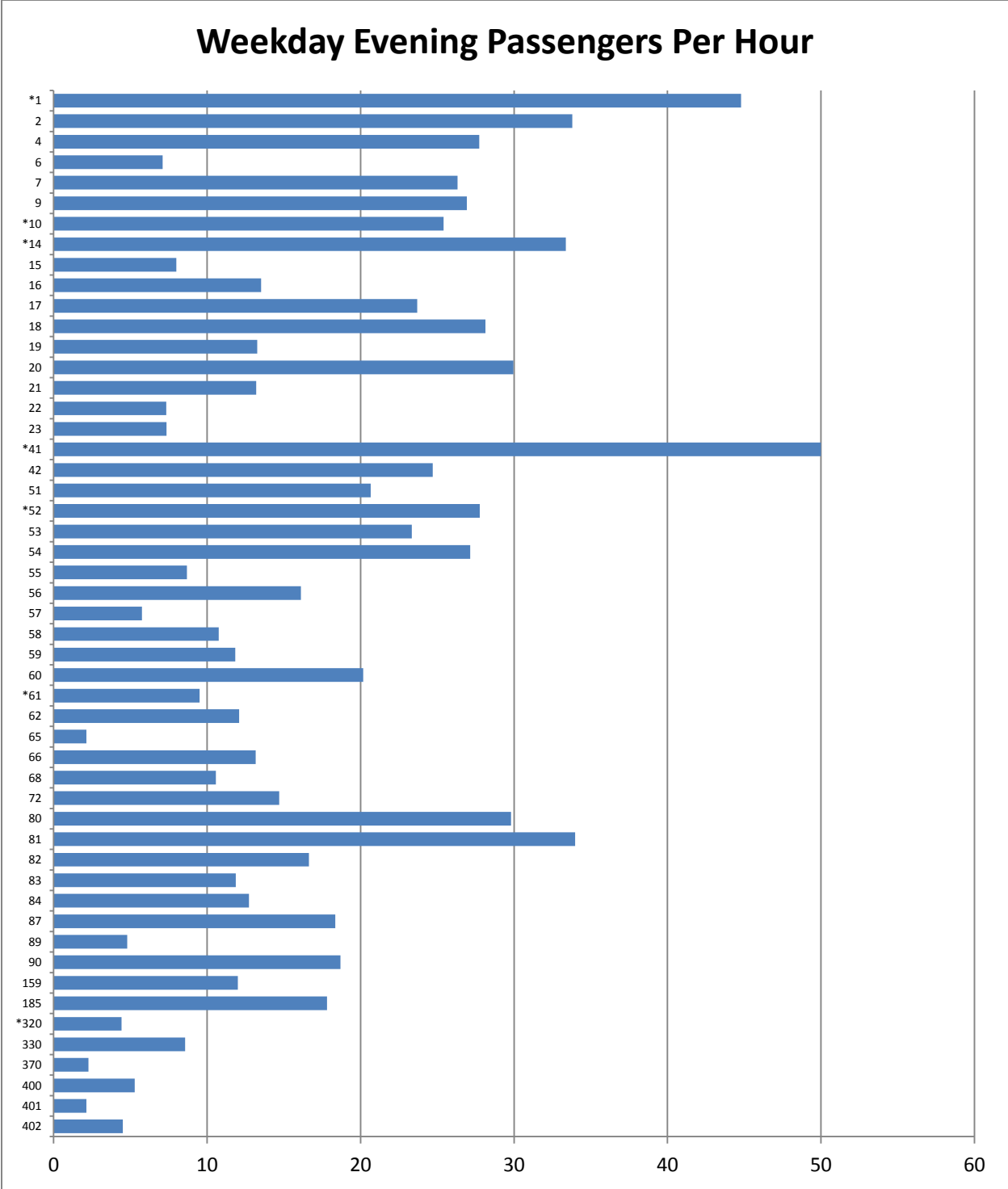
Access-A-Bus

- Two new expansion buses have been added to the Access-A-Bus fleet.

2015-16 Weekday Passengers per Hour

The following charts represent the 2015-16 passengers per hour based on the fall 2015 passenger count program and are an indication of route performance. They are shown by period, as specified in Halifax Transit’s service standards; daytime represents 6:00am to 6:00pm, evening represents 6:00pm to end of the service day.





**These routes that regularly cross the harbour have not been doing so during scheduled Macdonald Bridge closures, this has impacted their ridership throughout the service day.*

Daily Weekday Terminal Usage

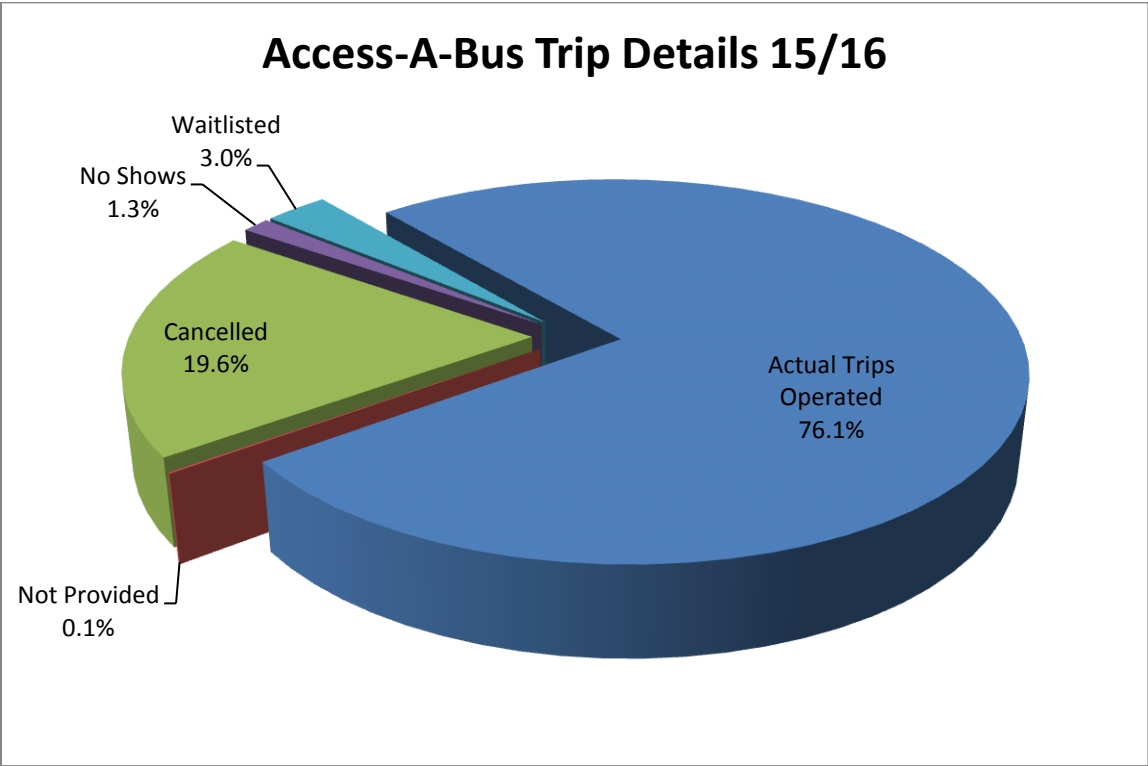
Terminal	Passengers On	Passengers Off	Total Passenger Activity
Bridge	8,325	8,224	16,549
Scotia Square	6,148	6,136	12,284
Mumford	4,664	4,669	9,333
Lacewood	1,885	1,542	3,427
Alderney	1,588	987	2,575
Portland Hills	1,344	1,219	2,563
MicMac Mall	1,255	1,274	2,529
Cobequid	1,076	1,050	2,126
Highfield	1,136	961	2,097
Penhorn	971	1,080	2,051
Sackville	984	885	1,869
Tacoma Centre	505	489	994
Water Street	610	314	924
Woodside Ferry	272	233	505
Total	30,763	29,063	59,826

Daily Weekday Park & Ride Lot Usage

Location	Daily Vehicle Usage	Capacity	Usage Rate
Woodside Ferry	515	515	100%
Sackville Terminal	385	385	100%
Portland Hills Terminal	207	230	90%
Hubley Centre	175	185	95%
Cobequid Terminal	110	110	100%
Alderney Terminal	90	110	82%
Fall River	71	90	79%
Porters Lake	58	132	44%
Maybank Field	30	30	100%
Sheldrake Lake	48	48	100%
Mumford Terminal	30	30	100%
Bridge Terminal	30	50	60%
Downsview	26	40	65%
Exhibition Park	0	50	0%
Total	1,775	2,035	87%

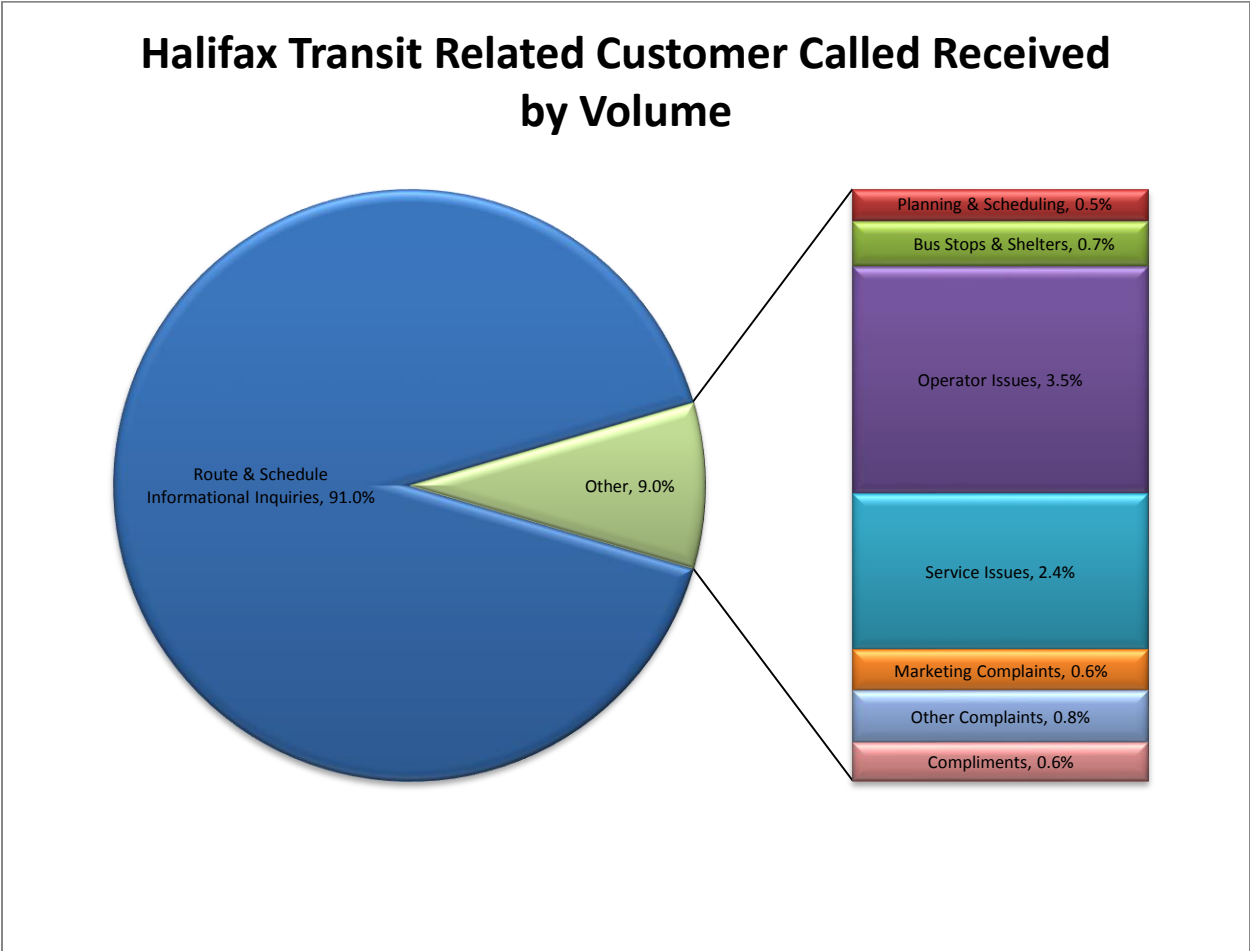
Access-A-Bus Trip Details

Below is a chart detailing trips requested for Access-A-Bus service in 2015-16. Halifax Transit expects to receive approximately 198,000 trip requests this year, with a 76% activation rate.



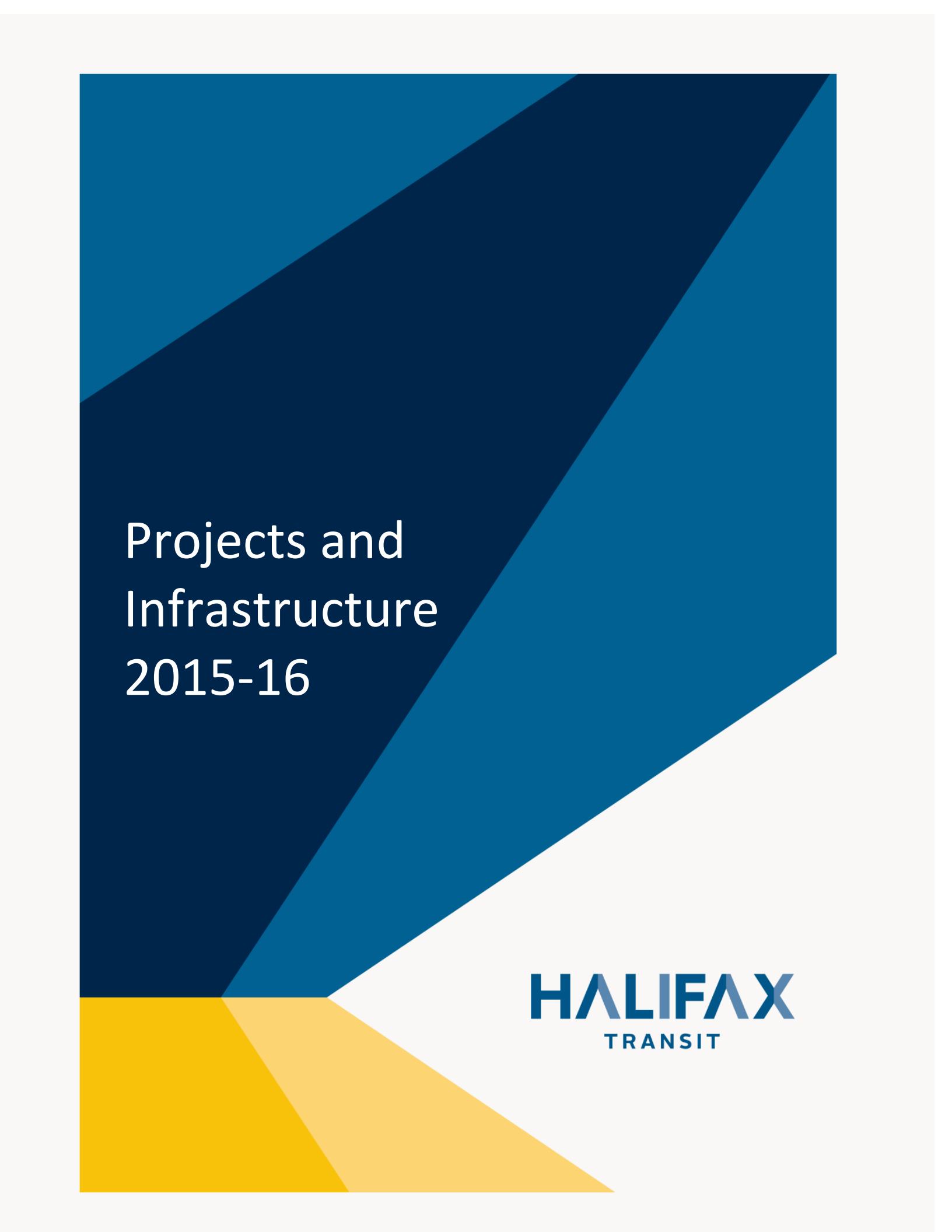
Marketing and Customer Service

The 311 Citizen Contact Centre will receive approximately 97,000 customer calls relating to Halifax Transit during 2015-16, representing approximately 24% of their total call volume. The majority of these calls, 91%, are related to route and schedule inquiries. The remaining 9% of calls are to report an issue or complaint as shown in the following chart.



Twitter @hfxtransit

Halifax Transit’s twitter account, @hfxtransit, was introduced in 2011-12 to improve customer communication. There are now over 30,000 followers. Customers can find news and updates regarding transit service by visiting: twitter.com/hfxtransit

The cover features a white background with large, overlapping geometric shapes in shades of blue and yellow. A dark blue shape is on the left, a medium blue shape is on the right, and a yellow shape is at the bottom. The text is positioned on the white background.

Projects and
Infrastructure
2015-16

HALIFAX
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Projects and Infrastructure 2015-16

Moving Forward Together Plan

The Draft *Moving Forward Together Plan*, including the proposed future transit network, was released to the public on February 17, 2015, followed by a diverse, ten week public and stakeholder engagement program. The largest consultation program ever undertaken in HRM, the consultation on the *Moving Forward Together Plan* resulted in an unprecedented volume of valuable feedback on the draft network. Over 15,300 online surveys were submitted over the ten week consultation period, and 2,480 individuals were engaged at one of 20 public engagement sessions held across the transit service area.

Once the consultation period ended in April 2015, Halifax Transit staff began compiling feedback and amending the draft network to better meet the needs of Halifax residents.

Lacewood Terminal

The new Halifax Transit Lacewood Terminal at 320 Lacewood Drive went into service in August 2015. This LEED Silver candidate terminal features a 14 bay platform and a 3400 square foot terminal building, which offers a comfortable indoor passenger waiting space, public washrooms, staff room and a central security/information kiosk. The building is heated through an in-floor radiant heat network and is lit with motion sensor LED lighting



and ample natural light. Bus schedule information is displayed on five large monitors inside and outside each bus bay is wired for future outdoor AVL-integrated Electronic Message Boards. The exterior passenger platform is complete with glass shelters, large landscape planters, and benches. Accessibility features such as bright yellow tactile plates, and braille bay number labels have been introduced on the platform as well, in order to assist the visually impaired navigate the facility. The terminal also includes a sheltered bike centre with a free standing repair station. Overall integration with the Halifax Mainland Common Park and adjacent facilities has been a success, with land shaping, storm water management, native tree planting, forest retention areas, paved accessible pathways and wayfinding signage.

The project was delivered on-time and on-budget and was celebrated with a very well-attended community BBQ.

Commuter Rail Study

The Commuter Rail Feasibility Study was completed and presented to Regional Council on October 20, 2015. The study concluded that commuter rail in Halifax is technically feasible but not economically viable. Following a debate, Council approved the recommendations to receive the consultant's study, direct staff to collaborate on the preparation of a sustainable transportation strategic plan that

integrates land use planning with transit planning, and for staff to continue cost implications dialogue with CN. The final Commuter Rail Feasibility Study and accompanying staff report is available to the public through Halifax.ca.

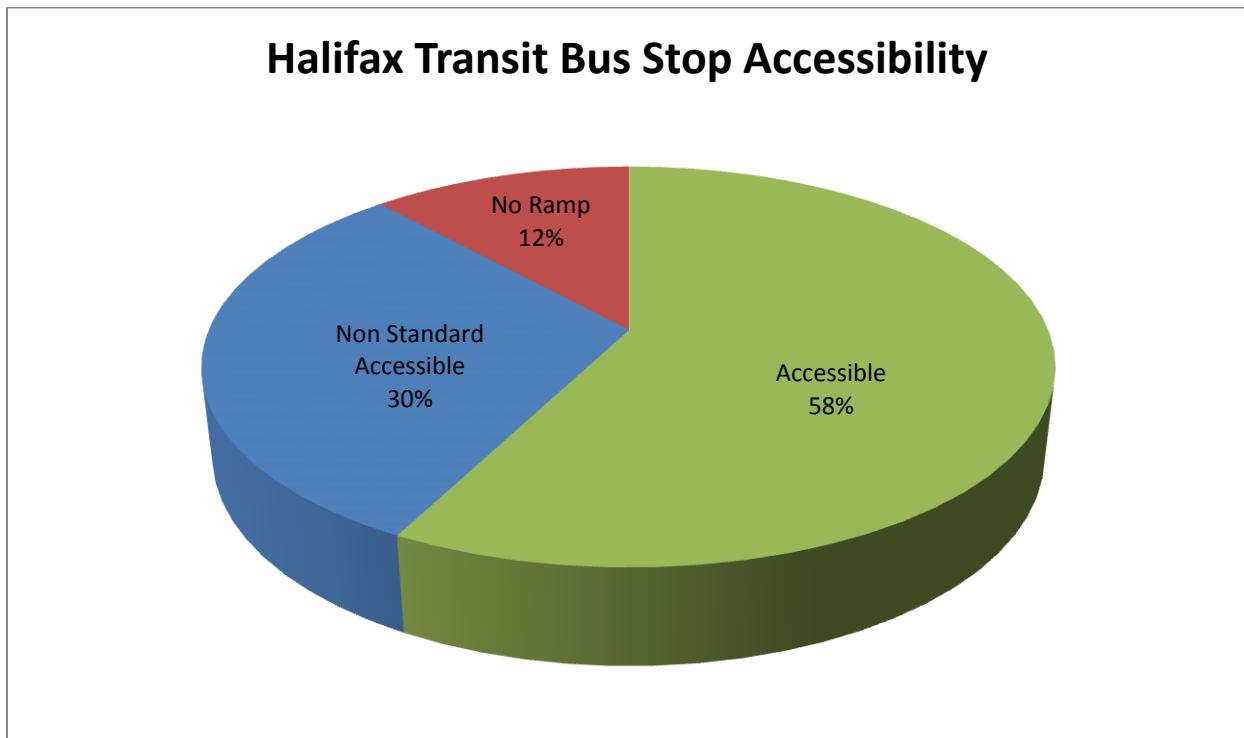
Shelters and Accessible Pads

There were 12 new shelters installed in new locations in 2015-16 and 14 existing shelters were also replaced with new shelters.

63 bus stops underwent infrastructure improvements:

- 15 stops were upgraded to become ‘Accessible’
- 4 ‘No Ramp’ stops were upgraded to ‘Non-Standard Accessible’
- 40 ‘Non-Standard Accessible’ stops had concrete pads installed, but did not result them being upgraded to ‘Accessible’
- 4 ‘Non-Standard Accessible’ stops had ramp to street concrete pads installed where there is no sidewalk in place adjacent to the landing pad.

The graph below depicts the current state of accessibility for all stops in the network.



Note: Non-Standard Accessible stops do not meet Halifax Transit’s accessibility standard; the ramp can be deployed and used at the customer’s risk. The majority of the No Ramp stops are located in areas without sidewalks and with narrow shoulders. Providing accessible infrastructure at many of these stops would not be feasible.

Appendices

A: Route Performance

B: New Route 56 Dartmouth Crossing Map

C: Service Standards

HALIFAX
TRANSIT

Appendix A: Route Performance

Weekday Route Performance Summary

Route	Classification	Daily Passenger Boardings		Daily Service Hours		Passengers Per Hour	
		14/15	15/16	14/15	15/16	Daytime	Evening
*1	Core	12,013	10,802	153	151	82	45
2	Core	2,633	2,910	59	62	51	34
4	Core	2,531	2,419	60	62	42	28
5	Local	125	163	4	4	43	
6	Local	616	653	28	30	27	7
7	Core	5,228	5,160	113	115	51	26
9	Core	2,449	2,335	47	47	55	27
*10	Core	6,493	5,530	107	108	59	25
11	Local	113	115	2	1	78	
*14	Core	3,754	3,246	62	62	57	33
15	Local	223	207	15	15	15	8
16	Local	1,433	1,069	43	46	26	14
17	Core	1,361	1,448	35	39	37	24
18	Core	2,233	2,402	55	59	46	28
19	Local	1,154	928	30	31	33	13
20	Core	3,428	3,557	71	83	49	30
21	Local	1,275	1,194	41	42	34	13
22	Local	467	405	35	36	13	7
23	Local	384	402	18	19	25	7
31	Urban Express	305	243	6	6	40	
32	Urban Express	490	522	13	13	39	
33	Urban Express	190	195	7	7	35	2
34	Urban Express	757	712	14	14	51	
35	Urban Express	342	287	8	8	34	
*41	Local	1,578	1,316	29	29	45	50
42	Local	1,070	1,163	34	36	33	25
51	Core	1,041	945	25	25	42	21
*52	Core	6,269	5,925	119	123	55	28
53	Core	1,356	1,167	25	26	50	23
54	Local	825	880	21	22	43	27
55	Local	529	493	22	23	26	9
56	Local	625	590	29	31	20	16
57	Local	535	595	37	39	17	6
58	Local	741	733	28	28	31	11
59	Core	2,089	1,883	77	80	31	12
60	Core	3,556	2,981	74	77	47	20

Route	Classification	Daily Passenger Boardings		Daily Service Hours		Passengers Per Hour	
		14/15	15/16	14/15	15/16	Daytime	Evening
*61	Core	2,960	2,660	77	76	41	10
62	Local	850	786	31	31	30	12
63	Local	775	867	17	18	49	
64	Local	354	354	10	10	34	
65	Local	253	241	16	17	18	2
66	Local	1,363	1,437	61	61	27	13
68	Local	1,447	1,251	48	50	28	11
72	Local	1,241	1,292	45	46	32	15
78	Urban Express	65	78	8	8	13	2
79	Urban Express	117	134	6	7	21	
80	Core	4,457	4,740	122	125	41	30
81	Local	1,420	1,436	50	52	27	34
82	Local	1,083	1,013	46	46	22	17
83	Local	176	193	13	14	15	12
84	Urban Express	1,199	1,189	29	28	44	13
85	Urban Express	185	152	4	4	36	
86	Urban Express	140	120	4	4	27	
87	Core	1,320	1,414	43	44	35	18
88	Local	78	85	5	5	18	-
89	Local	411	433	23	23	19	5
90	Local	1,372	1,371	47	48	31	19
159	MetroLink	906	806	37	39	35	12
185	MetroLink	1,346	1,302	46	47	46	18
*320	MetroX	584	604	51	51	18	4
330	MetroX	496	511	21	21	28	9
370	MetroX	151	173	14	14	14	2
400	Comm. – Rural	192	180	13	13	15	5
401	Comm. – Rural	129	129	12	11	14	2
402	Comm. – Rural	61	49	10	10	5	5
Ald	Ferry	1,815	3,738	24	30	228	94
WS	Ferry	2,026	2,648	21	21	204	41

**These routes that regularly cross the harbour have not been doing so during scheduled Macdonald Bridge closures, this has impacted their ridership throughout the service day.*

Urban Express, MetroLink, MetroX and Ferry routes are subject to passenger per hour and cost recovery standards only in peak travel direction as outlined in the table in Appendix C.

Weekday Route Performance Comparison

Route	Classification	Passengers per Hour				Cost Recovery	
		Daytime		Evening		14/15	15/16
		14/15	15/16	14/15	15/16		
*1	Core	89	82	56	45	82%	82%
2	Core	48	51	31	34	46%	55%
4	Core	44	42	34	28	44%	45%
5	Local	34	43	-	-	36%	50%
6	Local	25	27	14	7	23%	26%
7	Core	50	51	36	26	49%	52%
9	Core	55	55	40	27	54%	57%
*10	Core	67	59	39	25	64%	59%
11	Local	61	78	-	-	55%	96%
*14	Core	66	57	39	33	64%	60%
15	Local	16	15	13	8	16%	16%
16	Local	36	26	22	14	34%	27%
17	Core	39	37	12	24	40%	43%
18	Core	46	46	29	28	43%	47%
19	Local	43	33	23	13	39%	35%
20	Core	47	49	54	30	44%	49%
21	Local	36	34	14	13	33%	33%
22	Local	15	13	9	7	14%	13%
23	Local	23	25	8	7	22%	24%
31	Urban Express	52	40	-	-	55%	47%
32	Urban Express	37	39	-	-	39%	45%
33	Urban Express	36	35	-	-	29%	31%
34	Urban Express	57	51	-	-	59%	58%
35	Urban Express	43	34	-	-	45%	40%
*41	Local	55	45	55	50	56%	51%
42	Local	32	33	23	25	32%	38%
51	Core	46	42	28	21	45%	44%
*52	Core	54	55	46	28	56%	56%
53	Core	57	50	48	23	57%	52%
54	Local	43	43	21	27	41%	47%
55	Local	28	26	14	9	25%	24%
56	Local	24	20	15	16	22%	22%
57	Local	17	17	5	6	14%	17%
58	Local	31	31	12	11	28%	30%
59	Core	35	31	13	12	28%	29%
60	Core	59	47	23	20	50%	45%

Route	Classification	Passengers per Hour				Cost Recovery	
		Daytime		Evening		14/15	15/16
		14/15	15/16	14/15	15/16		
*61	Core	42	41	26	10	41%	41%
62	Local	33	30	10	12	28%	29%
63	Local	45	49	-	-	43%	53%
64	Local	36	34	-	-	37%	40%
65	Local	17	18	12	2	16%	17%
66	Local	26	27	11	13	24%	27%
68	Local	33	28	16	11	31%	29%
72	Local	31	32	16	15	29%	33%
78	Urban Express	10	13	-	-	8%	11%
79	Urban Express	20	21	-	-	18%	23%
80	Core	40	41	26	30	38%	44%
81	Local	27	27	41	34	30%	32%
82	Local	24	22	12	17	25%	25%
83	Local	15	15	9	12	13%	16%
84	Urban Express	43	44	10	13	44%	49%
85	Urban Express	46	36	-	-	49%	41%
86	Urban Express	34	27	-	-	36%	31%
87	Core	33	35	22	18	32%	37%
88	Local	18	18	-	-	17%	20%
89	Local	18	19	17	5	19%	21%
90	Local	32	31	19	19	30%	33%
159	MetroLink	39	40	32	12	30%	29%
185	MetroLink	48	50	21	18	36%	38%
*320	MetroX	18	18	9	4	17%	19%
330	MetroX	28	28	17	9	35%	39%
370	MetroX	13	14	2	2	16%	20%
400	Comm. – Rural	17	15	8	5	16%	16%
401	Comm. – Rural	13	14	2	2	12%	13%
402	Comm. – Rural	7	5	6	5	7%	6%
Ald	Ferry	140	228	42	94	38%	53%
WS	Ferry	172	204	30	41	51%	54%

**These routes that regularly cross the harbour have not been doing so during scheduled Macdonald Bridge closures, this has impacted their ridership throughout the service day.*

Urban Express, MetroLink, MetroX and Ferry routes are subject to passenger per hour and cost recovery standards only in peak travel direction as outlined in the table in Appendix C.

Appendix C: Service Standards

Service standards were approved by Halifax Regional Council as part of the Five-Year Strategic Operations Plan. Service standards (i.e. ridership, cost-effectiveness) are intended to build upon the strong foundation established within today's transit system, and to take Halifax Transit to the next level in terms of ridership, mode share, service guidelines and performance measurement of customer satisfaction.

Route Performance

Time Period	Core Routes	Local Routes	MetroLink / Express	MetroX	Community Urban	Community Rural	Ferry
Passenger/Hour Routes are expected to equal or exceed the following ridership targets per service hour.							
Weekday Daytime	40	25	50*	40*	-	-	390*
Evenings/Weekends	20	15	35*	-	-	-	290*
Peak	-	-	-	-	20	15	-
Off-Peak	-	-	-	-	10	10	-
Cost Recovery Routes are expected to recover the following minimum percentage of its operating cost.							
Weekdays Daytime	55%	40%	50%	50%	30%	30%	50%
Evenings/Weekends	35%	35%	30%	30%	20%	20%	30%
Vehicle Loadings Average peak-point ridership per vehicle shall not exceed the following percentage of seating capacity.							
Peak	125%	125%	125%	125%	125%	125%	100%
Off-Peak	100%	100%	100%	100%	100%	100%	100%

**These service standards apply in peak direction only.*

Route Coverage

	Minimum Service Span	Maximum Headway
Core Routes		
Weekdays	6am to 9am	15 minutes
	9am to 3pm	30 minutes
	3pm to 6:30pm	15 minutes
	6:30pm to 12 midnight	30 minutes
Saturdays	6am to 12 midnight	30 minutes
Sun/Holidays	7am to 11pm	30 minutes
Local Routes		
Weekdays	6am to 9am	30 minutes
	9am to 3pm	30 minutes
	3pm to 6:30pm	30 minutes
	6:30pm to 12 midnight	60 minutes
Saturdays	6am to 6:30pm	30 minutes
	6:30pm to 12 midnight	60 minutes
Sun/Holidays	7am to 11pm	60 minutes
MetroLink & Urban Express Routes		
Weekdays	6am to 9am	10 – 15 minutes
	9am to 3pm	30 minutes
	3pm to 6:30pm	10 – 15 minutes
	6:30pm to 12 midnight	30 minutes
MetroX		
Weekdays	6am to 6:30pm	30 -90 minutes
Community Urban		
Weekdays	6am to 12 midnight	30 minutes
Community Rural		
Weekdays	Peak	60 minutes
	Off-Peak	120 minutes
Ferry		
Weekdays	6:30am to 9am	15 minutes
	9am to 3pm	30 minutes
	3pm to 6:15pm	15 minutes
	6:15pm to 11:45pm	30 minutes
Weekends	6:30am to 11:45pm	30 minutes



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