



Transit Executive Committee Agenda

Council Chambers
Regional Headquarters Building
605 Rossland Road East, Whitby

Wednesday, September 8, 2021

1:30 PM

Please note: In an effort to help mitigate the spread of COVID-19, and to generally comply with the direction from the Government of Ontario whereby all organized public events of more than five people are prohibited, it is requested in the strongest terms that Members participate in the meeting electronically. Regional Headquarters is closed to the public, all members of the public may [view the Committee meeting](#) via live streaming, instead of attending the meeting in person. If you wish to register as a delegate regarding an agenda item, you may register in advance of the meeting by noon on the day prior to the meeting by emailing delegations@durham.ca and will be provided with the details to delegate electronically.

1. Roll Call

2. Declarations of Interest

3. Adoption of Minutes

A) Durham Region Transit Executive Committee meeting –
June 2, 2021

Pages 3-9

4. Delegations

5. Presentations

A) Josh Colle, Executive Director for Government and Public Sector practice, Ernst and Young LLP re: Durham Region Transit Demand Responsive Transit Study, Executive Summary

Pages 10-22

B) Michael Binetti, Supervisor, Service Design, Durham Region Transit re: The Route Ahead, Durham Region

Transit 2022-2025 Service Strategy [Item 7. B)] (2021-DRT-20)

Pages 23-36

6. Correspondence

7. Reports

A) General Manager's Report – September 8, 2021 (2021-DRT-19) Pages 37-56

B) The Route Ahead, Durham Region Transit 2022-2025 Service Strategy (2021-DRT-20) Pages 57-90

C) E-Mission Zero - Towards Zero Emission Public Transit in Durham Region (2021-DRT-21) Pages 91-103

D) Administration of U-Pass agreement (2021-DRT-22) Pages 104-105

8. Advisory Committee

8.1 Durham Region Transit Advisory Committee Minutes

A) Transit Advisory Committee meeting – May 18, 2021 Pages 106-112

9. Confidential Matters

There are no confidential matters to be considered

10. Other Business

11. Date of Next Meeting

Wednesday, October 6, 2021 at 1:30 PM

12. Adjournment

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The Regional Municipality of Durham

MINUTES

DURHAM REGION TRANSIT EXECUTIVE COMMITTEE

Wednesday, June 2, 2021

A regular meeting of the Durham Region Transit Executive Committee was held on Wednesday, June 2, 2021 in the Council Chambers, Regional Headquarters Building, 605 Rossland Road East, Whitby, Ontario at 1:31 PM. Electronic participation was offered for this meeting.

1. Roll Call

Present: Commissioner Collier, Chair
Commissioner Barton, Vice-Chair
Commissioner Anderson
Commissioner Carter attended at the meeting at 1:40 PM
Commissioner Drew
Commissioner Mulcahy
Commissioner Pickles
Commissioner Smith
Regional Chair Henry

Also
Present: Commissioner Crawford
Commissioner Grant

Staff
Present: E. Baxter-Trahair, Chief Administrative Officer
W. Holmes, General Manager, Durham Region Transit
J. Austin, Deputy General Manager, Business Services, Durham Region Transit
J. Bastarache, Communications – DRT, Corporate Communications, Office of the Chief Administration Officer
D. Beaton, Commissioner of Corporate Services
M. Binetti, Transportation Service Design, Durham Region Transit
J. Demanuele, Director of Business Services, Works Department
D. Dunn, Project Manager, Rapid Transit Implementation
S. Glover, Committee Clerk, Corporate Services – Legislative Services
L. Huinink, Director, Rapid Transportation & Transit Oriented Development, Office of the Chief Administration Officer
R. Inacio, Systems Support Specialist, Corporate Services – IT
A. McKinley, Deputy General Manager, Maintenance, Durham Region Transit
A. Naeem, Solicitor, Corporate Services – Legal Services
C. Norris, Deputy General Manager, Operations, Durham Region Transit

C. Tennisco, Committee Clerk, Corporate Services – Legislative Services

2. Declarations of Interest

There were no delegations to be heard.

Chair Collier, on behalf of the Committee and the Durham Region Transit Commission; and Bill Holmes, on behalf of the DRT staff, congratulated Cheryl Tennisco, Committee Clerk, on her upcoming retirement and thanked her for her hard work and professionalism during her time as the Committee Clerk for the Transit Executive Committee

3. Adoption of Minutes

Moved by Commissioner Pickles, Seconded by Commissioner Barton,
(31) That the minutes of the regular Durham Region Transit Executive
Committee meeting held on Wednesday, May 5, 2021, be adopted.
CARRIED

4. Delegations

There were no delegations to be heard.

5. Presentations

5.1 Lorraine Huinink, Director, Rapid Transit Implementation and Transit Oriented Development; and David Dunn, Project Manager, Rapid Transit Implementation; re: Bus Rapid Transit Investing in Canada Infrastructure Program (ICIP) Project Schedule Update

L. Huinink and D. Dunn provided a PowerPoint presentation update on the Investing in Canada Infrastructure Program (ICIP) projects and the phasing for the Durham-Scarborough Bus Rapid Transit (DSBRT) projects including Simcoe Street in Oshawa. A copy of the presentation was provided in the Agenda.

D. Dunn provided an overview of the project schedule for the Investing in Canada Infrastructure Program and Durham-Scarborough Bus Rapid Transit (DSBRT) projects. He advised that the three ICIP project submissions for DSBRT have been approved; the Province has invested approximately \$70 million into the DSBRT program, through the Quick-Win funding; and, that the approved ICIP funding will advance the BRT corridor along Highway 2 following the Transit Project Assessment Process (TPAP) scheduled for completion by the end of 2021.

Highlights of the presentation included:

- Investing in Canada Infrastructure Program (ICIP) project submissions
 1. Simcoe Street Rapid Transit Environmental Assessment (ICIP funding approved)

2. Oshawa, Whitby & Ajax Rapid Transit Road Works (ICIP funding approved)
3. Pickering Median Transit, Road Works (ICIP funding approved)
- Durham-Scarborough BRT Transit Project Assessment Process (TPAP)
- Simcoe Street Rapid Transit Environmental Assessment (EA)
- ICIP project list Ajax, Whitby & Oshawa rapid transit
 - ICIP Scope of Work – Oshawa
 - ICIP Scope of Work – Whitby
 - ICIP Scope of Work – Ajax
 - ICIP Scope of Work – Pickering
- Converting existing curbside to median Pickering and Ajax segments
- BRT implementation progress

D. Dunn provided an overview of the approved Investing in Canada Infrastructure Program (ICIP) projects that account for over \$180 million of the Durham-Scarborough Bus Rapid Transit (DSBRT) construction costs; and, the \$5 million allocated for the EA and Visioning Study for the Simcoe Street corridor commencing in 2021.

D. Dunn advised that the DSBRT implementation process includes registries for establishing the prequalified consultants and contractors to help mitigate project delays; the issuance of the Request For Proposals (RFP) for the detailed design for the four project segments covering 7.3 km of the proposed BRT lanes; the completion of the R-Plans for the first phase of property acquisition; and, that the acquisition letters to affected property owners are planned to go out starting in the summer.

D. Dunn noted that a Metrolinx presentation, along with a staff report, will be coming forward at the June 9, 2021 Committee of the Whole meeting to update Regional Council on the DSBRT study.

D. Dunn responded to questions with respect to the City of Pickering construction timelines from Dixie Road to Bainbridge Road; the opportunity for the signalized traffic lights to be installed in conjunction with the construction of the median located at the intersection of Guild Road and Denmark Road; and, whether the negotiations are underway for the property acquisitions for the new CN Rail tunnel and if any additional Federal application approvals are required for the tunnel.

Discussion ensued regarding the timelines for the scope of work in the Town of Ajax for the median queue lanes; and, the proposed design for 5 lanes in Pickering Village.

Commissioner Mulcahy expressed a concern regarding the potential use of up to three metres of land, off the front of Celebration Square, at the Whitby Central Public Library in the downtown area in the Town of Whitby. D. Dunn advised that section is outside of the scope of the current ICIP projects and suggested that this

question be brought forward to Metrolinx at the June 9, 2021 Committee of the Whole meeting.

Further discussion ensued with respect to a concern regarding the lack of communication with the businesses located along Dundas Street that will be losing property frontage in the Town of Whitby. D. Dunn advised that the businesses within the ICIP segments located between Lake Ridge Road to Des Newman Boulevard will be sent letters; and, that all businesses within the DSBRT Study corridor were provided written notices prior each of the three Public Information Centres. D. Dunn noted that Metrolinx also communicated with the businesses via the Business Improvement Association and the Chamber of Commerce.

Commissioner Mulcahy requested that staff from Durham Region Transit and Economic Development reach out to the businesses located along the BRT corridor regarding the BRT segment projects.

L. Huinink advised that the project team will be working with the Community Liaison Committees, to further communicate with these businesses, and plans are to establish a construction ambassador role within the Rapid Transit Office to also reach out to these businesses as requested.

L. Huinink and D. Dunn responded to additional questions regarding opportunities to ensure residents are provided advanced notice of any upcoming construction; the start date for the construction of the DSBRT median project segments; and, the plans for public outreach on how to safely make a legal U- turns at the controlled intersections. Discussion followed on the plans for a one-way cycle track, with a separate sidewalk, along Highway 2 through the Town of Ajax and being diverted through Pickering Village.

5.2 Michael Binetti, Supervisor, Service Design, and Christopher Norris, Deputy General Manager, Operations re: Upcoming Service Enhancements

Michael Binetti and Christopher Norris provided a PowerPoint presentation on the Upcoming Service Enhancements to the DRT network.

M. Binetti provided an overview of the summer and fall highlights. Highlights of his presentation included:

- Major travel Market review
- Ridership Recovery - Principles
- Summer Highlights: June 21, 2021
 - Route 110: Pickering Parkway – Sunbird Loop
 - Route 120: Pickering Station – Sunbird Loop
 - Route 224: Ajax Station – Taunton
 - Route 917: Toronto – Oshawa
 - On Demand

- Fall Highlights: September 7, 2021
 - Route 392: Oshawa Centre – Ontario Shores
 - Route 407: Harmony Terminal – South Oshawa
 - Route 411: Oshawa Centre – South Courtice
 - Route 901: North Campus – Oshawa Centre - Lakeview
 - Route 905: Whitby – Harmony Terminal – Uxbridge
 - Route 920: Toronto – Amazon – North Campus
 - Overnight Mobility
- Service Change Summary – June 2021
- Service Change Summary – September 2021

C. Norris advised that the service updates in June 2021 will provide residents and visitors greater mobility and help to develop new transit markets and services to the waterfront parks, access to conservation areas in the trailheads in Durham Region; and, to the Rouge National Park in Toronto as the Province reopens.

C. Norris also advised that this September is full of opportunity for DRT as the employment and post secondary travel markets come back. He noted that the changes will provide a new 24 hour service for greater mobility; develop the high school, post secondary and employment markets; provide additional travel options for essential workers; and, new service integrations as DRT connects to the McCowan Station near the Scarborough Town Centre and to the Toronto Transit Commission's Blue Night Network (Route 920).

Chair Collier asked how the Fall return to school will affect the travel markets for the schools. C. Norris advised that discussions are on-going with the school boards and the Durham Student Transportation Services in regards to DRT's role in how students travel to and from school and fare incentives.

Discussion ensued regarding the need for an aggressive plan to be in place to communicate the upcoming service enhancements, out to the public. C. Norris noted that DRT is working with Corporate Communication to highlight the service enhancements; and, also with employers to support information being provided to their employees.

6. Correspondence

There were no correspondence items to be considered

7. Reports

A) General Manager's Report – June 2, 2021 (2021-DRT-15)

Report #2021-DRT-15 from B. Holmes, General Manager, Durham Region Transit, was received.

Moved by Commissioner Smith, Seconded by Commissioner Pickles,
(32) That Report #2021-DRT-15 of the General Manager, Durham Region
Transit, be received for information.

CARRIED

B) Durham Region Transit customer policies update (2021-DRT-16)

Report #2021-DRT-16 from B. Holmes, General Manager, Durham Region
Transit, was received.

Moved by Commissioner Barton, Seconded by Commissioner Carter,
(33) That Report #2021-DRT-16 of the General Manager, Durham Region
Transit, be received for information.

CARRIED

C) 100,000 On Demand passenger promotion (2021-DRT-17)

Report #2021-DRT-17 from B. Holmes, General Manager, Durham Region
Transit, was received.

Moved by Commissioner Drew, Seconded by Regional Chair Henry,

(34) A) That in recognition of the success of Durham Region Transit (DRT)
On Demand launched on September 21, 2020 as part of the
Ridership Recovery network, that DRT staff be authorized to issue
a PRESTO card pre-loaded with a \$500 value to the On Demand
passenger completing trip 100,000 as recorded in the On Demand
technology platform scheduling system;

B) That should the 100,000-passenger be a Durham Region Transit
or Region of Durham employee or a member of an employee's
family, the next registered passenger who is not a Durham Region
Transit or Region of Durham employee or member of an
employee's family shall be recognized as the 100,000-passenger
and issued the \$500 PRESTO card; and

C) That the \$500 PRESTO card be funded from the approved 2021
Durham Region Transit Operating Business Plans and Budget.

CARRIED

D) Transit Advisory Committee member appointment from Accessibility Advisory
Committee (2021-DRT-18)

Report #2021-DRT-18 from B. Holmes, General Manager, Durham Region
Transit, was received.

Moved by Commissioner Barton, Seconded by Commissioner Drew,
(35) That Report #2021-DRT-18 of the General Manager, Durham Region
Transit, be received for information.

CARRIED

8. Advisory Committees

There were no advisory committee items to be considered.

CARRIED

9. Confidential Matters

There were no confidential matters to be considered.

10. Other Business

- A) Amendment and Extension of Lease Agreement for Premises Occupied by
Durham Region Transit Located at 419 King Street West, in the City of Oshawa
(2021-W-22)
-

B. Holmes advised the Committee that Report #2021-W-22: Amendment and
Extension of Lease Agreement for Premises Occupied by Durham Region Transit
Located at 419 King Street West, in the City of Oshawa was adopted earlier
today by the Works Committee and will be considered at the June 26, 2021
Regional Council meeting.

11. Date of Next Meeting

The next regularly scheduled Durham Region Transit Executive Committee
meeting will be held on Wednesday, September 8, 2021 at 1:30 PM in the Council
Chambers, Regional Headquarters Building, 605 Rossland Road East, Whitby.

12. Adjournment

Moved by Commissioner Anderson, Seconded by Commissioner Pickles,
(363) That the meeting be adjourned.

CARRIED

The meeting adjourned at 2:20 PM

Respectfully submitted,

S. Collier, Chair

Committee Clerk

Durham Region Transit (DRT) Demand Responsive Transit Study

Summary Presentation to Transit Executive Committee
(TEC)

Presenter: Josh Colle

08 September 2021



Building a better
working world

Executive Summary

The mobility landscape and public transit customer expectations are rapidly shifting, which has been accelerated by the global pandemic and advances in technology. In response to these changes, DRT has begun to explore and pilot an On Demand transit service. To advance this initiative, DRT contracted EY to evaluate the current state, and make future state recommendations for an integrated Demand Responsive service. The future state model and recommendations were evaluated through the following accounts under EY’s Transit Evaluation Framework: customer, equity, service provider, financial, economic and environmental. A series of recommendations were generated from this study.

- 1

Integrate Specialized and On Demand into a single Demand Response Services, including operations, scheduling, booking and customer support
- 2

Examine existing workforce communication channels and tools for effectiveness, invest in cross-training, and implement new feedback mechanisms to drive ongoing dialogue and improvements
- 3

Carefully consider and plan for investments in technologies that enable Customer Relations Management, workforce management, and analytics while negotiating for better access to 3rd-party data
- 4

Engage stakeholders in the proposed future state model and design for Demand Responsive transit and allow time to implement educational initiatives alongside marketing campaigns and rebranding efforts
- 5

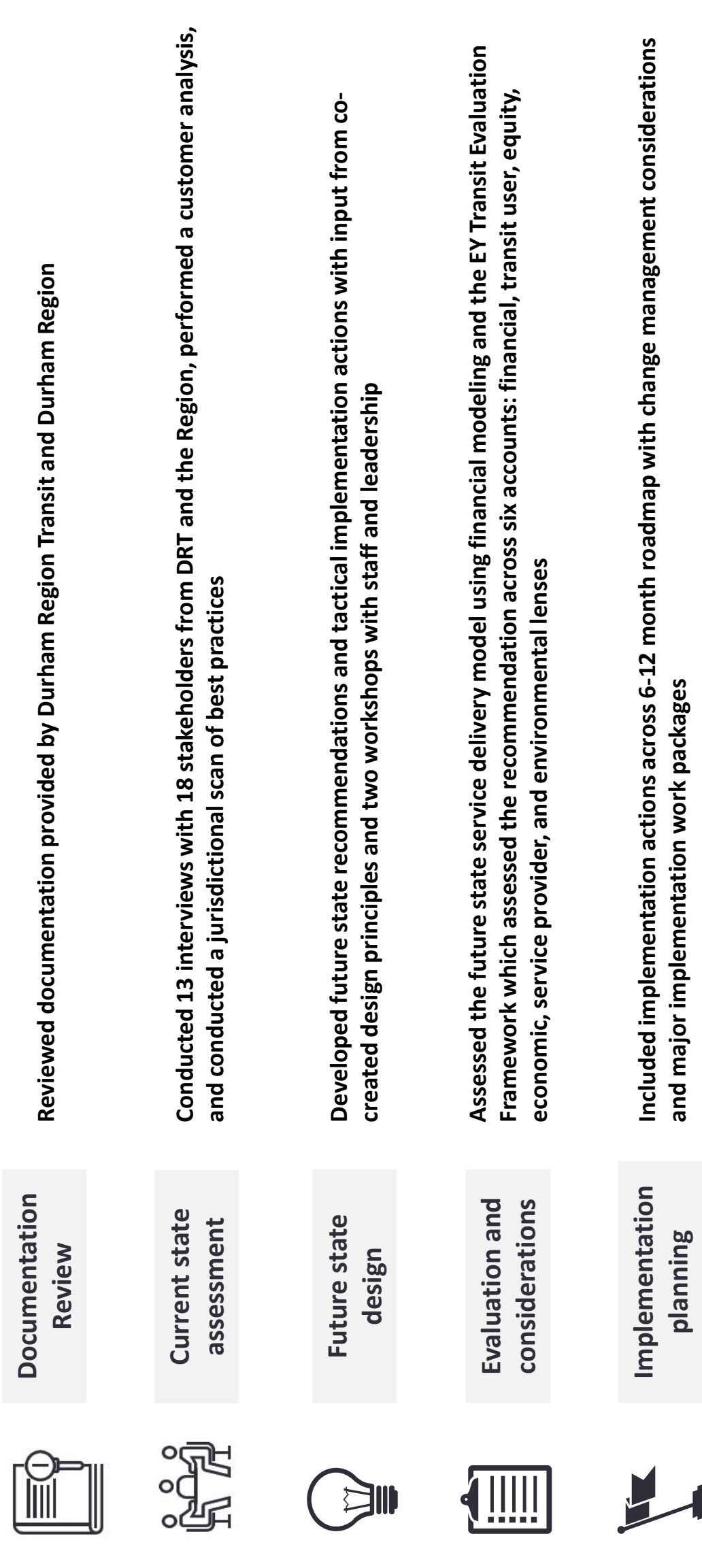
Establish a “One DRT” strategy with underlying objectives and KPIs, while strengthening cross-boundary partner collaboration and embedding social equity principles into delivery

The results of this study confirm that DRT should move forward with implementing an integrated Demand Responsive service that is more spontaneous, equitable, reliable, and customer-focused.

Project approach

Approach to conducting this study

The recommended future state service delivery model was informed, developed, tested, and validated under this approach



Current state assessment and future state recommendations

Overview of current state findings

While major progress has been made in offering an On Demand service, there are five key areas of opportunity for DRT in moving to an integrated Demand Responsive Service

THEME	1 Service Delivery & Operations	2 Culture & Collaboration	3 Technology & Analytics	4 External Comms & Education	5 Strategy & Key Partnerships
	<i>"What services we provide and how we deliver them"</i>	<i>"How we work together to deliver customer-centric service"</i>	<i>"What tools enable our work and understanding of customers"</i>	<i>"How we meaningfully connect with external stakeholders"</i>	<i>"How we position and enable our services to deliver value"</i>
RECENT PROGRESS	<p>DRT provides 100% service coverage, is launching 24/7 service in the Fall, owns a fully accessible fleet, and continues to see increases in both service demand and use of PRESTO card payment.</p>	<p>DRT has a rich transit history, a complementary mix of new and tenured staff, and culture that prioritizes quality customer service, innovative approaches, and a desire to be a leader in public transit.</p>	<p>DRT was among the first to deploy an integrated app for digital trip planning and booking that includes Demand Responsive service, and is looking for opportunities to tap into better customer insights.</p>	<p>DRT provides multiple avenues for customers to learn about and book On Demand service, despite limitations related to tech, rural access to broadband, and engagement during the pandemic.</p>	<p>DRT envisions spontaneous travel to customers of all abilities, has established social equity principles, and forged relationships with various organizations and advocacy groups.</p>
KEY CURRENT STATE FINDINGS	<p>For a more seamless, inclusive customer experience, DRT can extend existing booking and scheduling capabilities to current customers of Specialized service.</p> <p>To increase service quality, DRT would benefit from building contract management skills and capacity to better guide 3rd-party operators.</p>	<p>More effective, two-way channels of communication and feedback are needed to enhance coordination and consistency of how DRT service offerings are messaged and understood.</p> <p>Despite recent organizational changes, there continues to be value in breaking down siloes, cross-training, and knowledge sharing across the business.</p>	<p>There are limitations to the quality of customer, financial, and operational data that can be extracted from DRT's existing suite of technology tools and solutions, which result in significant manual effort to derive meaningful insights.</p> <p>3rd-party data is largely transactional and manually compiled, analyzed and reported on.</p>	<p>Increased public and targeted engagement is needed to inform the design of a seamlessly integrated, inclusive Demand Responsive service offering.</p> <p>While DRT plans to refresh branding at the same time, a relatively larger effort will need to be expended on educating beneficiaries of the service on the new offering.</p>	<p>Further work can be done to articulate the vision and strategic objectives for the future of Demand Responsive transit, including what specific initiatives and KPIs should be used to measure the success of the service for both DRT and key partners.</p>

Overview of current state assessment

As part of the current state assessment, EY examined Durham Region's demographics and riders, performed a scan of other jurisdictional practices, and developed several personas to better understand user needs and customer journeys

- ▶ The Durham Region demographics analysis reveals high levels of ethnic, linguistic, economic, and mobility diversity across the region including the identification of communities of social equity that require additional consideration in the formation of a future service delivery model
- ▶ Four personas were developed that reflect DRT's choice, cross-boundary, and internal riders based on the current state of Demand Responsive transit as it is delivered today
 - ▶ Four customer journeys were developed to reflect the future experience of each persona given an integrated Demand Responsive model
- ▶ A jurisdictional scan was conducted to assess 16 Canadian On Demand transit projects and 6 international On Demand initiatives that showcased best practices including virtual bus stops, digital COVID-19 screening, and pre-booking trip capabilities
- ▶ The current state assessment provided additional context to the current state findings and supported the design of a future state service delivery model based on best practices and demographic and customer analyses



Design principles

The future state model for Demand Responsive service was designed with emphasis on adhering to the top three principles

1

Customer-centric: Commit to transition from a traditional and transactional transit service offering to one that flexibly meets customer needs, allowing for equitable and accessible mobility

2

Equitable Access: Focus on providing everyone the right to travel efficiently, competitively, in compliance of AODA and regardless of differing individual abilities, socioeconomic factors, or access to mobile technology

3

Strategic Alignment: Facilitate the achievement of strategic objectives and KPIs set out in the Durham Region Strategic Plan and other key strategic initiatives (e.g. such as the myDurham Intelligent Communities Plan and the Corporate Climate Action Plan)

Supporting

Efficiency: Minimize use of limited resources to provide a consistent, repeatable service with little ‘waste’ and few exceptions to standard practice or delivery approach

Value for Investment: Maximize the quality and extent of services provided relative to the cost to customers, residents, DRT, and other orders of government who contribute funding in support of public transit

Safety and Wellbeing: Promote the physical and mental safety and wellbeing of all stakeholders who interact with DRT services from the public and customers to employees and contractors

Employee-centric: Center staff and employees at the core of any transformation with staff needs, training, restructuring, and transformation considered through change management, education, and communications

Flexibility: Provide a high degree of organizational agility and nimbleness required to respond to future business and customer needs, such as by using open source technologies, flexible contract terms, use of external resources, etc.

Data driven: Utilize data gathered from internal and external sources to derive insights valuable to improving service delivery and customer satisfaction

Innovative: Encourage an environment of experimentation in what and how services are provided, as a means of keeping DRT ‘ahead of the curve’ and a leader amongst its comparator organizations

Overview of future state recommendations

Recommendations have been developed to align to the five areas of opportunity identified via the current state assessment

1	2	3	4	5
Service Delivery & Operations	Culture & Collaboration	Technology & Analytics	External Comms & Education	Strategy & Key Partnerships
<p><i>“What services we provide and how we deliver them”</i></p> <p>For a more seamless, inclusive customer experience, DRT can extend existing booking and scheduling capabilities to current customers of Specialized service. To increase service quality, DRT would benefit from building contract management skills and capacity to better guide 3rd - party operators.</p>	<p><i>“How we work together to deliver customer-centric service”</i></p> <p>More effective, two-way channels of communication and feedback are needed to enhance coordination and consistency of how DRT service offerings are messaged and understood. Despite recent organizational changes, there continues to be value in breaking down siloes, cross-training, and knowledge sharing across the business.</p>	<p><i>“What tools enable our work and understanding of customers”</i></p> <p>There are limitations to the quality of customer, financial, and operational data that can be extracted from DRT’s existing suite of technology tools and solutions, which result in significant manual effort to derive meaningful insights. 3rd-party data is largely transactional and manually compiled, analyzed and reported on.</p>	<p><i>“How we meaningfully connect with external stakeholders”</i></p> <p>Increased public and targeted engagement is needed to inform the design of a seamlessly integrated, inclusive Demand Responsive service offering. While DRT plans to refresh branding at the same time, a relatively larger effort will need to be expended on educating beneficiaries of the service on the new offering.</p>	<p><i>“How we position and enable our services to deliver value”</i></p> <p>Further work can be done to articulate the vision and strategic objectives for the future of Demand Responsive transit, including what specific initiatives and KPIs should be used to measure the success of the service for both DRT and key partners.</p>
<p>Further integrate Specialized and On Demand services scheduling, booking, dispatch, and customer support. Set clear 3rd-party contract service metrics and continue to invest in physical infrastructure.</p>	<p>Examine existing workforce communication channels and tools for effectiveness, invest in cross-training, and implement new feedback mechanisms to drive ongoing dialogue and improvements.</p>	<p>Carefully consider investments in technologies and resources that enable CRM, workforce management, and analytics while negotiating for better access to 3rd-party data.</p>	<p>Engage stakeholders to assess the proposed future state model and design for demand responsive transit. Allow time to roll out education alongside marketing campaigns and rebranding efforts.</p>	<p>Establish the “One DRT” strategy with underlying objectives and KPIs, while strengthening cross-boundary partner collaboration and embedding social equity principles into delivery.</p>

KEY CURRENT STATE FINDINGS

FUTURE STATE RECOMMENDATIONS

The path forward

Transit Evaluation Framework | Overview

Utilizing EY's holistic Transit Evaluation Framework approach to evaluate the future state service delivery model

EY used the Transit Evaluation Framework to assess the recommended service delivery model through 6 accounts. Their impact assessment and implications are detailed below.

<p>Demand Responsive transit services network provides more seamless, efficient, and equitable movement of people across the region, resulting in improved customer experience as a result of more direct travel, shorter journeys, reduced wait times and simplicity of trip planning.</p> <p>Assessment: HIGH</p>	<p>Through the delivery of Demand Responsive transit services, users with different abilities will have greater access to transit and reduced wait times. Overall, all users will have more choice over where they are able to live, work and play.</p> <p>Assessment: HIGH</p>	<p>A Demand Responsive transit services provider is more equipped to action on Regional objectives and improve service delivery, facilitating regional mobility on a larger, more integrated, and more equitable scale.</p> <p>Assessment: HIGH</p>
<p>An optimized Demand Responsive transit service model will initially generate operational efficiencies and eventually provide cost savings, allowing for reinvestment in other priority areas of Durham Region Transit.</p> <p>Assessment: MEDIUM</p>	<p>Demand Responsive transit services improve the connectivity and economic growth of the region by increasing access to employment opportunities, retaining talent, and enhancing the Region's investment profile.</p> <p>Assessment: MEDIUM</p>	<p>A Demand Responsive transit service allows for the more efficient deployment and management of assets across the network to reduce waste and emissions across the system, and supports a mode shift away from personal vehicles, thereby reducing overall environmental impact to the region.</p> <p>Assessment: LOW</p>
<p>In assessing the future state model through these six accounts, the results of the evaluation provide clear evidence in support of DRT proceeding to adopt the future state model and progress recommendations to transition to an Integrated Demand Responsive Service.</p>		

Implementation roadmap | Overview

The following ten major roadmap activities are recommended and sequenced to reflect inherent dependencies



Conclusion | Demand Responsive transit study

- ▶ Informed by the current state assessment and future state recommendations, a service delivery model was developed based on a set of principles that prioritized customer-centricity, equitable access to service, and overall strategic alignment to DRT and Durham Region goals
- ▶ The proposed future state model was effectively tested and refined with input from DRT and Durham Region staff and leadership, as well as evaluated against the Transit Evaluation Framework and financial modelling to determine its benefits, implications, and viability
- ▶ In applying a customer lens to the recommendations, the future state service delivery model is expected to provide for an improved customer experience based on an analysis of how various customer journeys will be impacted
- ▶ Future implementation considerations were developed including a roadmap of sequenced implementation activities and a list of potential change impacts to both the organization and customers
- ▶ Furthermore, future state recommendations were reviewed for AODA compliance and alignment with Durham Region's Accessibility Policy and the multi-year Accessibility Plan. This review confirmed that DRT's current eligibility categories and attendant policy are compliant and can continue to be applied across all vehicle types. Looking forward, the new future state model should be reviewed regularly as service grows and customer needs evolve

The results of this study confirm that DRT should move forward with implementing an Integrated Demand Responsive service that is more spontaneous, equitable, reliable and customer-focused.

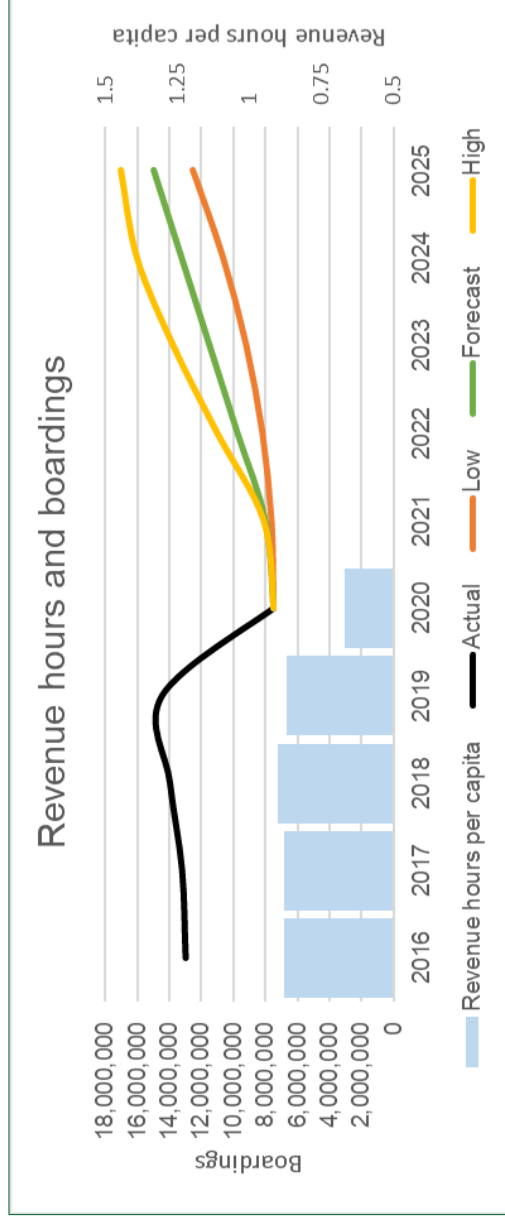


The Route Ahead Durham Region Transit 2022 - 2025 Service Strategy

**Transit Executive Committee
Wednesday September 8, 2021**

Looking to 2025

- The previous service strategy set the course for ridership increases over the 2016-2020 period
- Investments in the DRT network advanced record ridership in 2019
- By 2025, ridership is expected to approach 2019 levels



E Example of a social equity goal

Pillars

Availability E

- There when you need us
- Close to you
- Frequent service

Innovation

- Meet evolving needs and trip patterns
- Enhanced trip planning applications
- Flexible service delivery

Reliability

- Reduce travel time and on-time
- Meet changing travel needs
- Transit priority measures

Safety E

- Improve the customer environment on board vehicles, at stops, terminals and stations

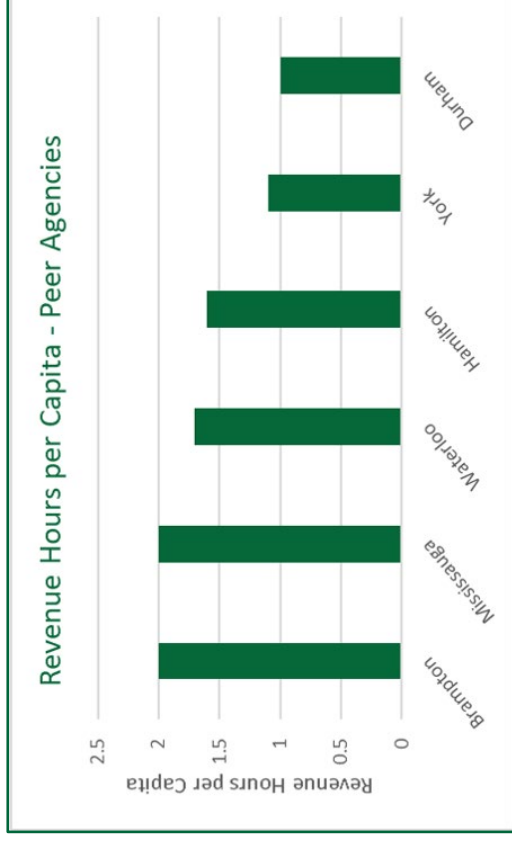
Growth

- Transit-first solutions to new communities
- Support the Region's economic development

Overview

- Guide transit service plan as DRT looks to regain ridership during the pandemic recovery period and ensure access for all residents
- Adapt services to new and changing travel behaviour and builds the foundation for future growth
- Positions transit as a viable alternative to single-occupancy vehicles and a reliable means of travel for people who do not have a car or cannot drive

E



CUTA 2019 statistics

The Route Ahead – Growing Ridership




Support existing customers:

- Enhance frequency and access to transit services, expand service to recreational and employment opportunities, and ensure all residents have equitable access to transit.

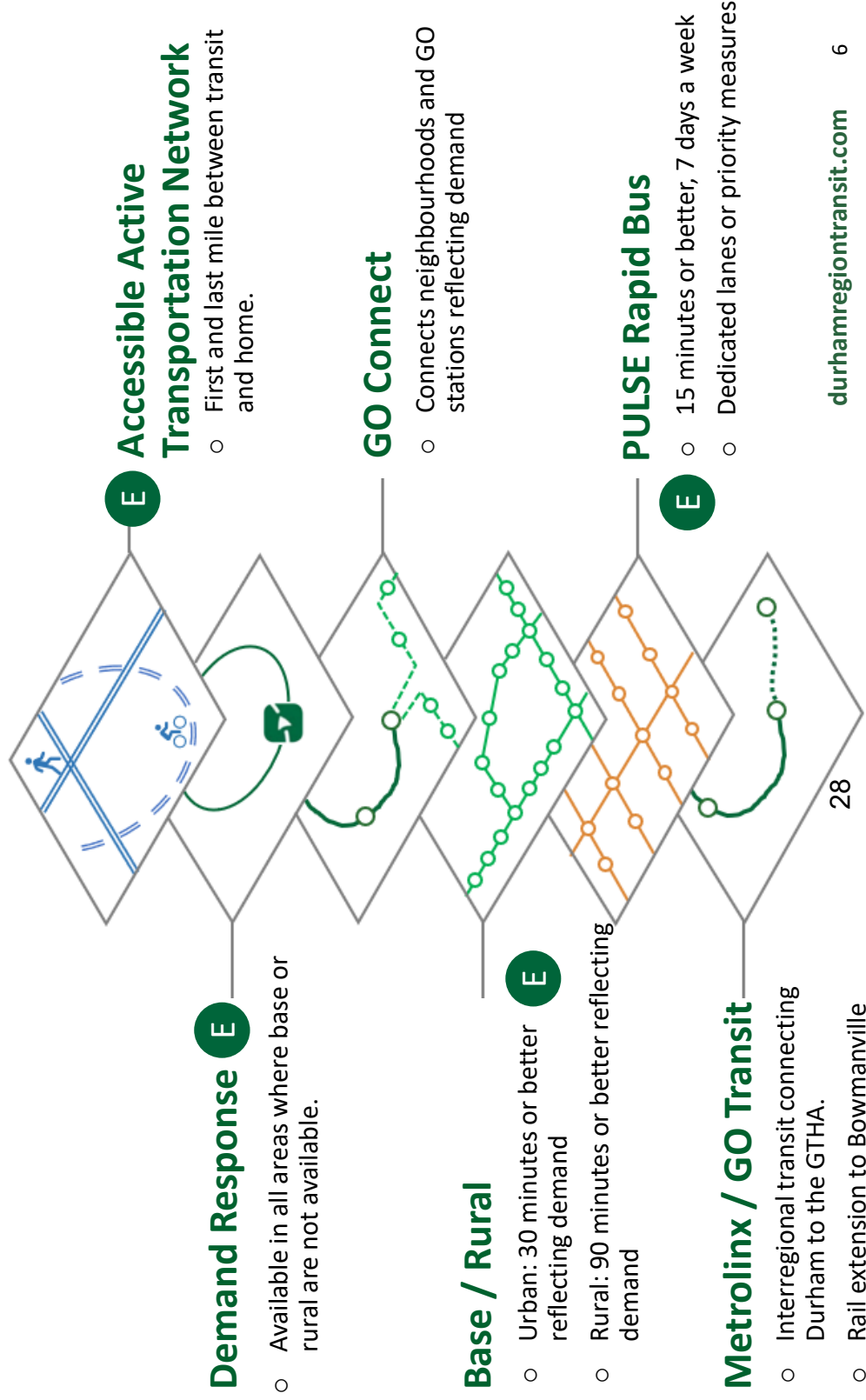
Demonstrate value for discretionary customers by:

- More frequent services, work with regional partners on campaigns to reinforce the value of transit, enhance the transit network with competitive travel times and efficient, and offer flexibility in service modes.

Capture new travel markets:

- Recreational travel 
- Employment centres 
- Overnight travel 
- Travel within Durham

Integrated Network



Service guidelines

Guides how transit services are delivered to an area by time of day and day of the week, ensures that services are sustainable and implemented in an efficient and fair manner.

- Transit service available 24-hours per day within the urban area.
- Scheduled routes will operate on roads conducive to transit use, such as arterial and collector roads. Service on local roads is discouraged.
- Service proximity: the walking time to the nearest bus stop
 - 80 per cent within 500-metres (4 to 5 minutes)
 - 95 per cent within 800-metres (8 to 10 minutes)
- PULSE Rapid Bus: considerations
 - The corridor is identified in the Durham Region Transportation Master Plan and Metrolinx Regional Transportation Plan as future rapid transit or rapid bus/priority bus.
 - Service can sustain minimum PULSE headways.

Service guidelines – Span and Service Levels

Span of service and service levels vary for Demand Response zones and scheduled routes, responding to customer demand.

Minimum headways		PULSE	Base	GO Connector (weekday only)	Rural	Overnight
Morning peak	05:00 - 08:59	15	30	15	90	N/A
Midday	09:00 - 15:59	15	30	N/A	90	N/A
Afternoon peak	16:00 - 18:59	15	30	15	90	N/A
Early evening	19:00 - 21:59	30	30	N/A	90	N/A
Late evening	22:00 - 24:00	30	30	N/A	90	N/A
Overnight	00:00 - 04:59	N/A	N/A	N/A	N/A	30

Service guidelines – Ridership productivity

Ridership productivity guideline provides a measure for the effectiveness of a transit route. Demand Response service is available in zones where scheduled route does not meet minimum ridership productivity target.

E

Operating period		PULSE	Base	GO Connector	Rural
Weekday Peak	Class Average	40	25	25	8
	Minimum	30	20	20	8
Weekday Midday	Class Average	40	20	NA	8
	Minimum	30	15	NA	8
Weekday Evenings	Class Average	30	20	NA	8
	Minimum	20	15	NA	8
Saturday	Class Average	35	20	NA	8
	Minimum	25	15	NA	8
Sunday	Class Average	30	20	NA	8
	Minimum	20	15	NA	8

Local Area Transit Plans

In specific growth areas of the Region the urban fabric continues to develop. Local Area Transit Plans will support DRT to work with stakeholders on developing adaptable transit service as these areas grow.

- Bowmanville (Clarington)
- Newcastle (Clarington)
- Courtice (Clarington)
- Kedron and Windfields (Oshawa)
- Port Perry (Scugog)
- Seaton (Pickering)
- Brooklin (Whitby)



Infrastructure

Hubs and stations

- Improve integration between Demand Response and Scheduled services.
- Support active transportation
- Improve customer experience at DRT operated infrastructure

Bus stops

- E** • Hard surfaced stops by 2025.
- Link to the active transportation network.
- Shelters will be installed at stops:
 - With more than 20 daily boardings.
 - At transfer points
 - Near relevant facilities such as hospitals and seniors facilities
 - in Priority Neighbourhoods where a social equity factor of 1.5 will be used when evaluating boardings.

33

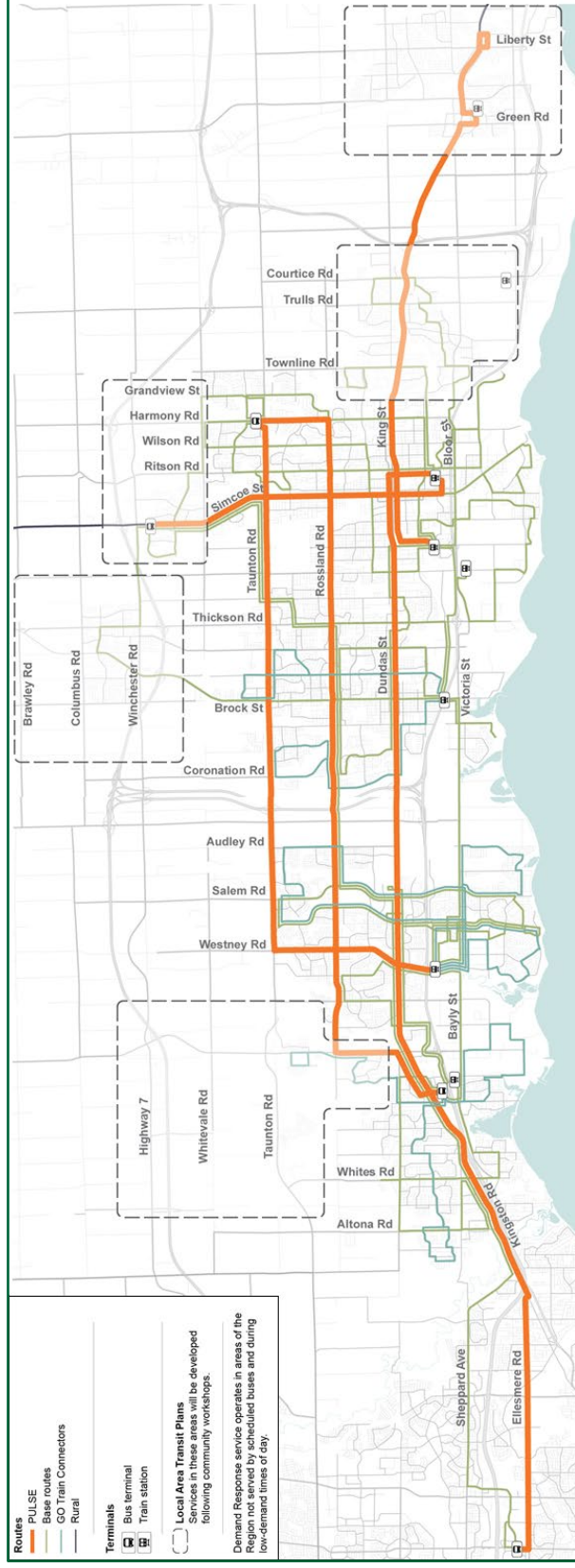
Transit priority

- Work with partners on implementation of:
 - Transit priority on busy corridors.
 - Queue Jumps.
- Advocate for additional transit priority at GO stations.

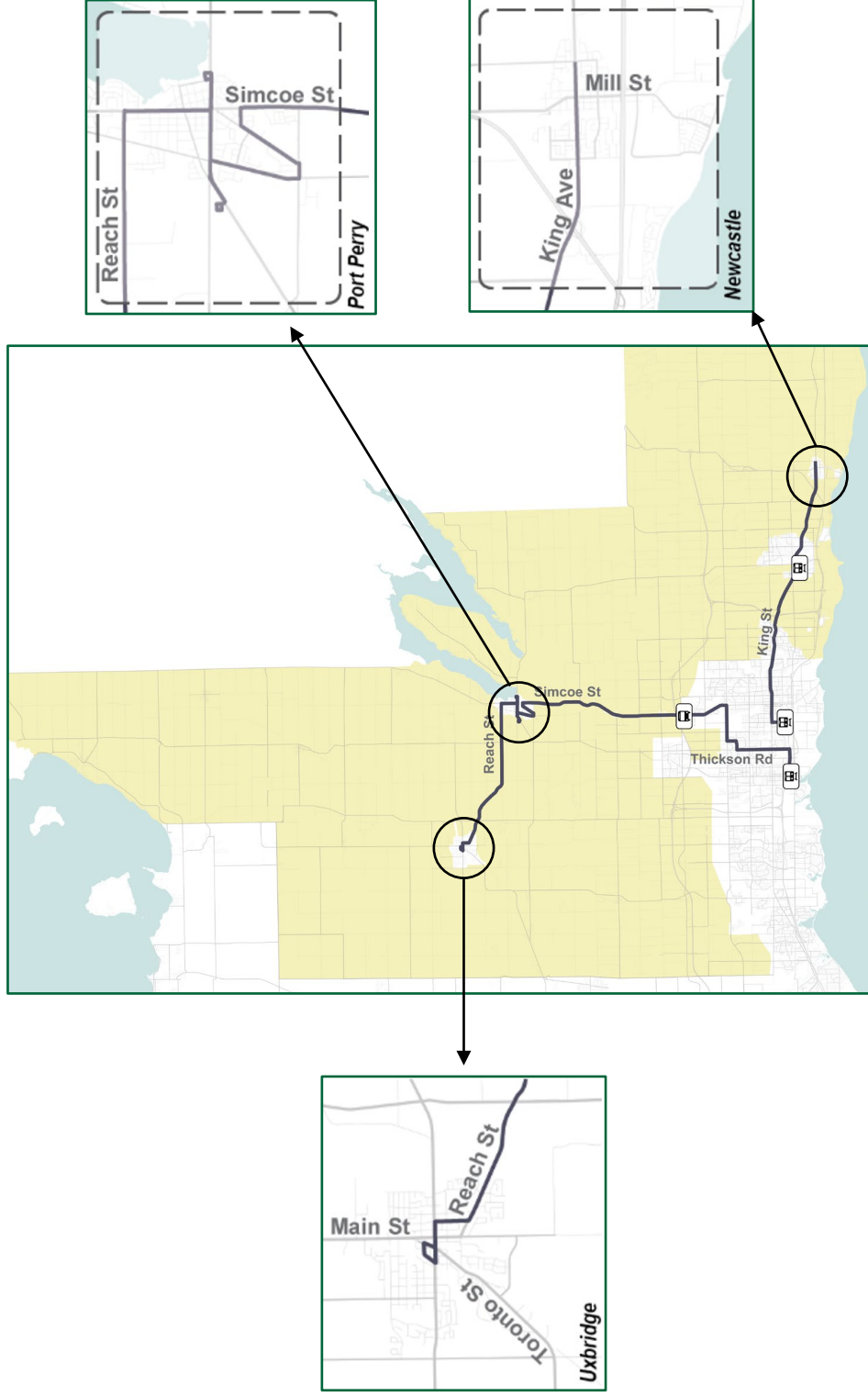
Wayfinding and customer information

- Provide easy to understand information.
- Reduce barriers to accessing information. **E**

2025 Network - Urban



2025 Network - Rural





Join us on the Route Ahead

Durham Region Transit
605 Rossland Road East
Whitby, Ontario L1N 6A3
Phone: 1-866-247-0055
durhamregiontransit.com

If this information is required in an accessible format, please contact 1-800-372-1102 ext. 3702



The Regional Municipality of Durham Report

To: Durham Region Transit Executive Committee
From: General Manager, Durham Region Transit
Report: #2021-DRT-19
Date: September 8, 2021

Subject:

General Manager's Report – September 8, 2021

Recommendation:

That the Transit Executive Committee recommends

That this report be received for information.

Report:

1. Purpose

- 1.1 This report is submitted at each Transit Executive Committee (TEC), for information.

2. Background

- 2.1 The General Manager Report provides regular updates on key performance measures and summaries of current activities and transit issues in Attachment #1.

3. Previous Reports and Decisions

- 3.1 Not applicable

4. Financial

- 4.1 The General Manager's Report focuses mainly on performance and service standards. There are no financial impacts associated with TEC's receipt of this report.

5. Relationship to Strategic Plan

5.1 This report aligns with/addresses the following strategic goals and priorities in the Durham Region Strategic Plan:

- a. Service Excellence

6. Conclusion

6.1 For additional information, contact: Bill Holmes, General Manager, at 905-668-7711, extension 3700.

7. Attachments

Attachment #1: General Manager's Report – September 8, 2021

Respectfully submitted,

Original signed by

Bill Holmes
General Manager, DRT

Recommended for Presentation to Committee

Original Signed by

Elaine C. Baxter-Trahair
Chief Administrative Officer



General Manager's Report
September 8, 2021
TEC
Attachment #1

Performance Measures Dashboard	2
Safety	3
Ridership	4
Service Delivery	7
Updates	11
General	15

Performance Measures Dashboard

Safety

Key performance indicator	Description	Latest Measure	Current	Target ¹	Current Variance to Target (per cent)	YTD Status ² (per cent)
Collisions	Number preventable collisions per 100,000 km	July	0.25	0.43	✓ -41.9	✓ -10.0

Ridership

Scheduled						
Ridership (x1,000)	Number passengers	July	365	334	✓ 9.2	✗ -43.6
PRESTO Ridership	Customers paying using PRESTO (per cent)	July	78.6	65.4	✓ 13.2	✓ 54.0
Bus full occurrences	Number operator reported occurrences	July	8 ³	483	NA	NA
Demand Responsive						
Ridership - Specialized	Number customer trips	July	5,338	3,877	✓ 37.7	✗ -39.6
Unaccommodated Rate - Specialized	Trip requests not scheduled (per cent)	July	1.1	0.6	⚠ 0.5	✓ -0.2
Ridership – On Demand	Number customer trips	July	10,157	271	NA	NA

Service Delivery

Scheduled						
On time performance	On-time departures from all stops (per cent)	Service Period 2 ⁴	80.3	80.3	✓ 0	✗ -1.0
Service availability	Scheduled service delivered (per cent)	Service Period 2 ⁴	99.4	99.6	⚠ -0.2	✓ 0.3
Mean Distance Between Failure (MDBF)	Average number of revenue service kilometres between occurrences of vehicle defects impacting service (revenue service kilometers)	June	14,646	N/A	N/A	NA

¹Target is 2020 measure for the same period

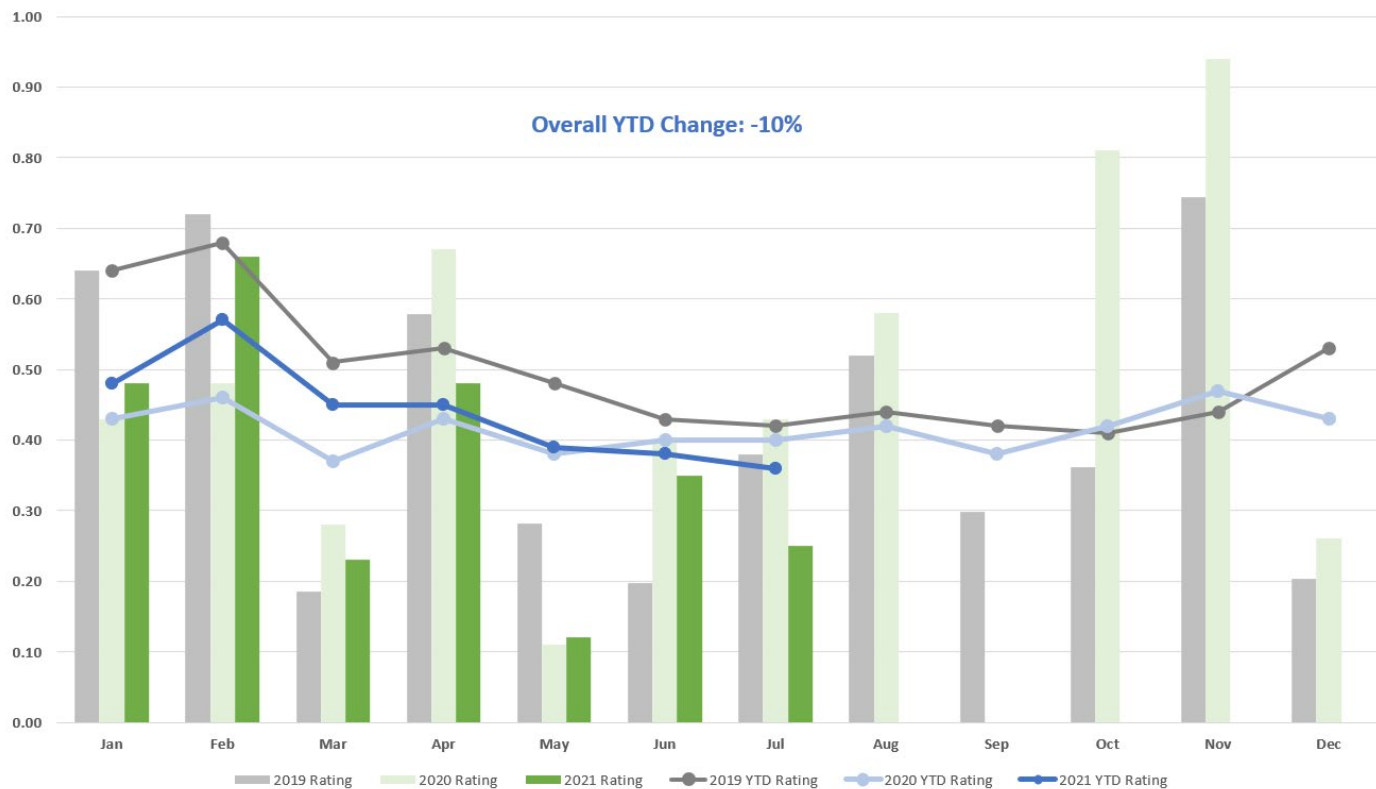
²Year to Date (YTD) compared to previous year

³Bus capacity limited to seated load, reduced ridership during pandemic

⁴April 5 through June 20, 2021

Safety

Preventable collisions rate per 100,000 km



Definition: A preventable collision is one in which the driver failed to do everything reasonable to avoid the collision. The preventable collision rate is the number of preventable collisions per 100,000 kilometres of travel for all Durham Region Transit (DRT) vehicles.

A collision may not be reportable to police based on the Highway Traffic Act, but for DRT purposes all collisions are documented and investigated.

Analysis

The preventable collision rate continues to improve in 2021, ten per cent lower than last year through July. The positive monthly trend continued in July, down 25 per cent compared to 2020.

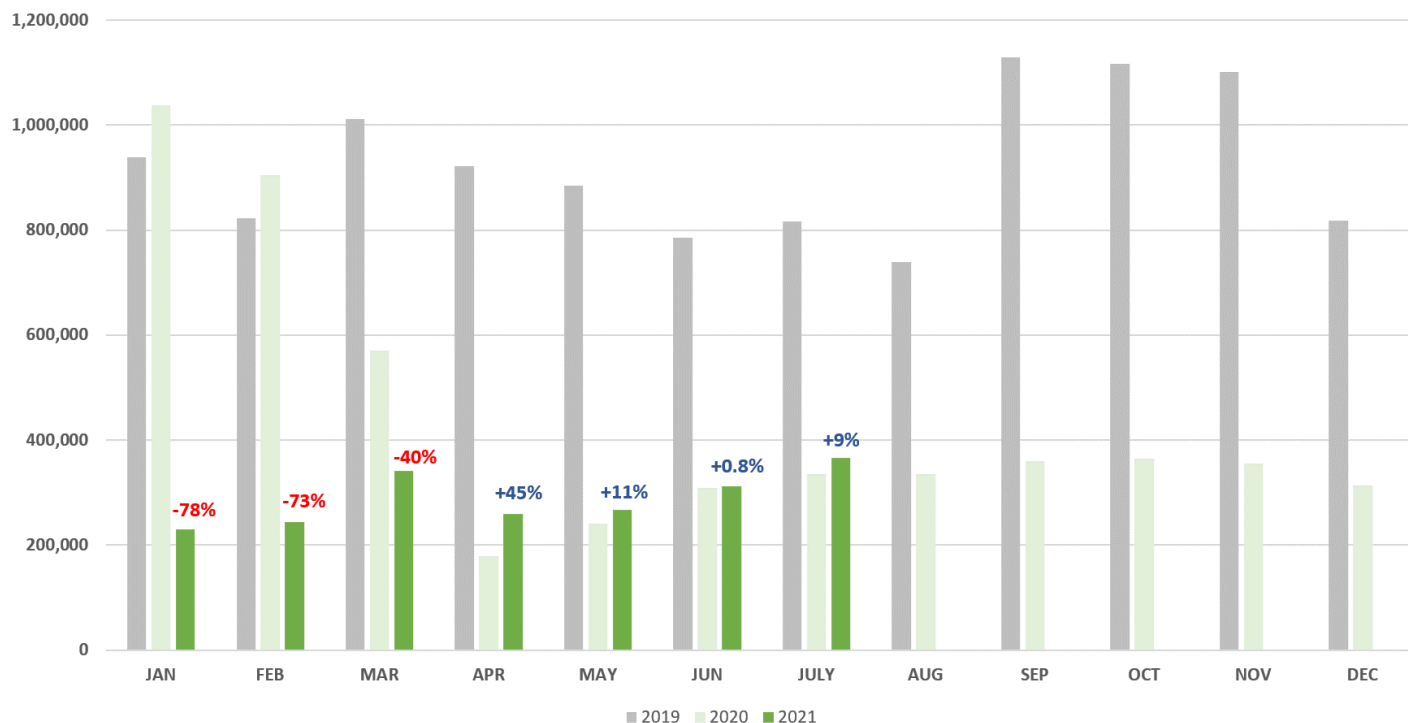
Action Plan

Safety and Training staff have implemented additional measures to curb the trend of increasing monthly collision rate.

- Trainers and mobile supervisors deployed to depots and relief points to host “safety talks” with bus operators, focussing on work preparations and defensive driving habits.

Ridership

Scheduled transit



Definition: Ridership is the sum of all passenger trips. A passenger trip is considered a one-way trip from origin to destination, regardless of the number of transfers that may be required. Ridership data is calculated from fare box data and data from PRESTO, GO Bus One Fare Anywhere, and On Demand.

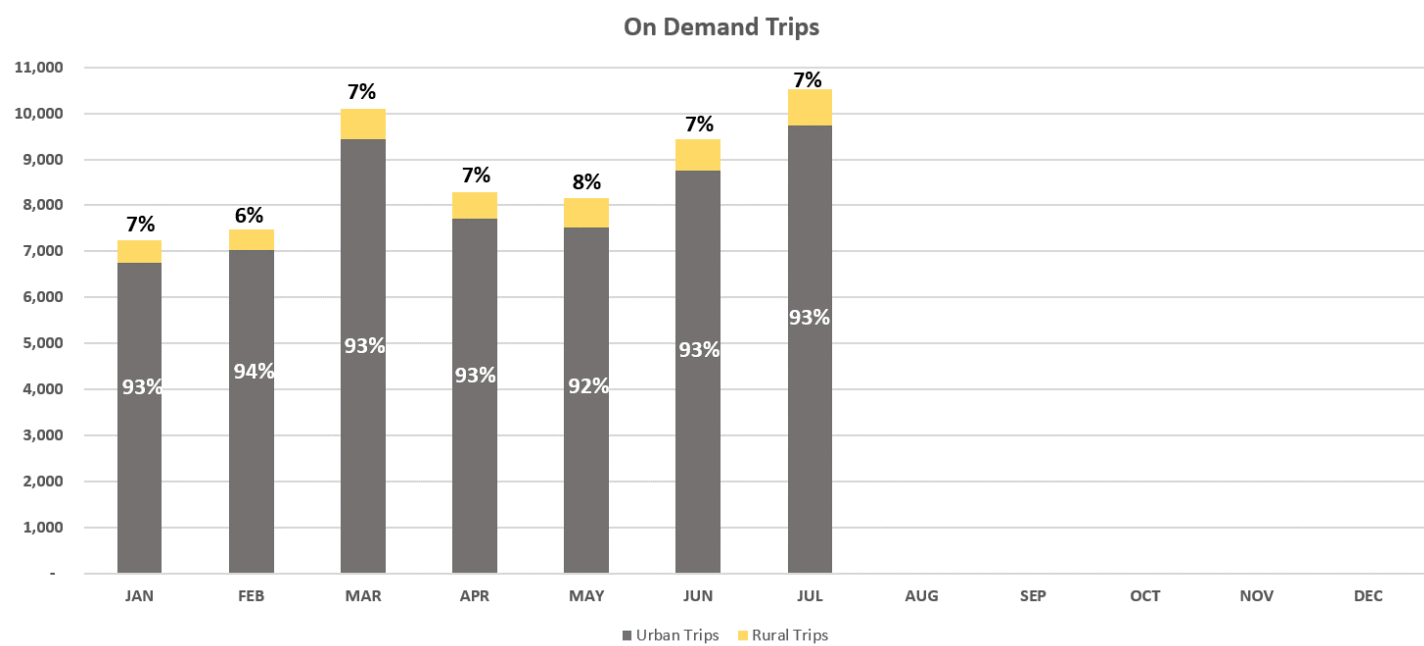
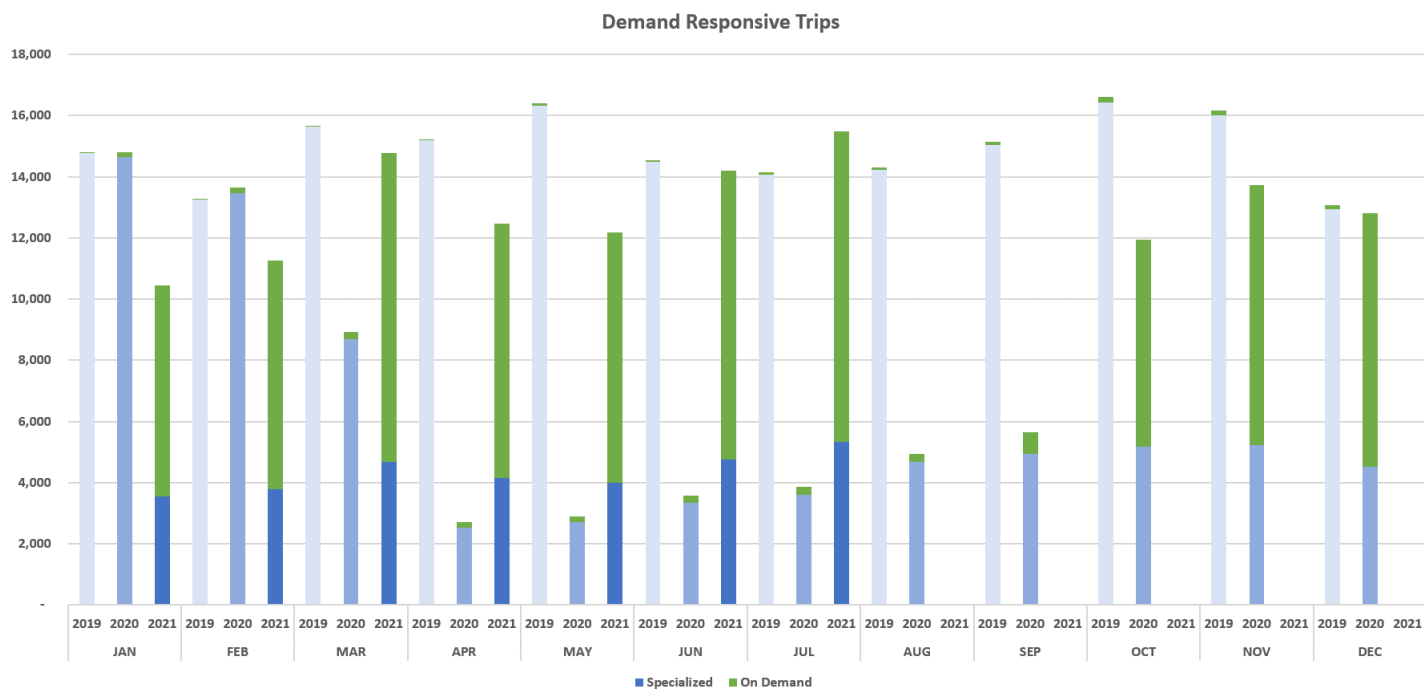
Results

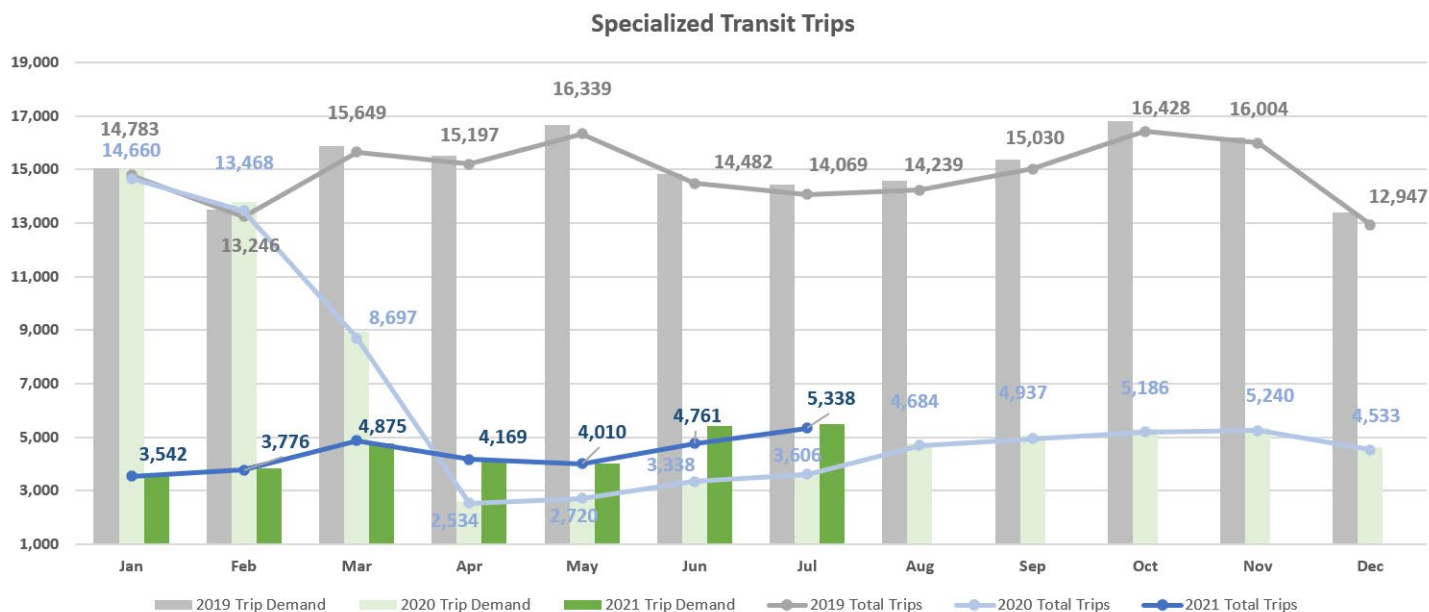
Monthly ridership continues to improve since April; nine per cent higher in July compared with 2020, and 45 per cent of 2019 ridership.

Action Plan

Service enhancements scheduled for September will accommodate expected ridership increases as people return to work, post secondary campuses resume classes, and youth return to secondary schools.

Demand Response Transit





Definitions:

Ridership: A trip is considered a one-way passenger trip from origin to destination, regardless of the number of transfers that may be required.

Trip Demand (Specialized): Specialized transit trip demand is the sum of all trips delivered, no-shows and cancelled at the door, and unaccommodated trips.

Unaccommodated Rate (Specialized): An unaccommodated Specialized transit trip is one where DRT is unable to schedule a trip for the specific requirement requested by the customer, or the customer declined to accept the trip option provided by the booking agent.

Results

On Demand continues to experience record monthly ridership, reaching 10,157 monthly trips.

Like scheduled service ridership, specialized service ridership continues to improve, with June ridership at 38 per cent of 2019 levels. Specialized transit delivered 98.9 per cent of trip requests in July.

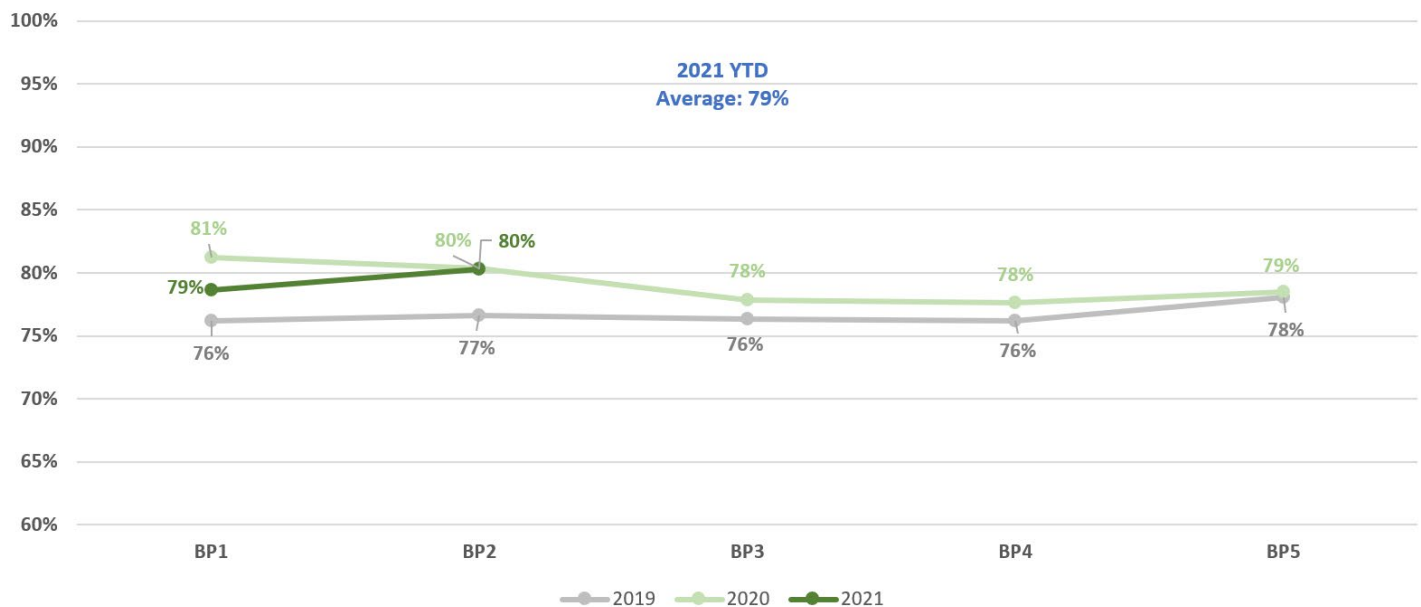
Action Plan

Staff continue to review ridership trends and the pandemic status to project service level and routing requirements in advance of the service change planned for September 7, 2021. The ridership monitoring framework indicates that while improving, ridership within low demand areas have not reached the minimum thresholds to return scheduled routes within the next four-week period.

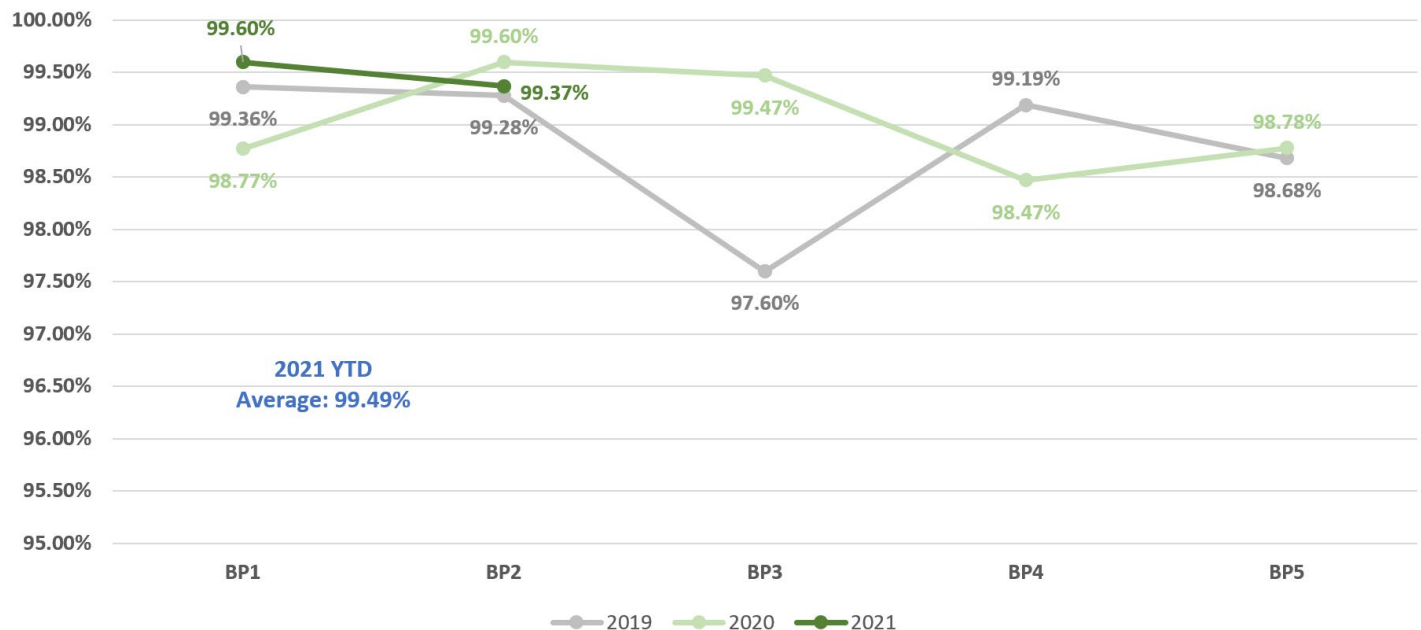
Service Delivery

On Time Performance and Availability (conventional)

2021 On-Time Performance



2021 Service Availability



Definition

On Time Performance (OTP) is a measure of the percentage of buses departing a bus stop no more than zero minutes early and five minutes late. The annual OTP target has increased to 80 per cent. OTP is reported for each service period.

Service availability measures the actual service delivered by DRT compared to the scheduled revenue service. The service availability target is 99.5 per cent. Service availability is reported for each service period.

Results

OTP for 2021 service period 2 (BP2), between April 5 and June 20, improved by one per cent compared to 2021 service period 1, and remained consistent with 2020 service period 2. Year to date OTP is one per cent below the target of 80 per cent.

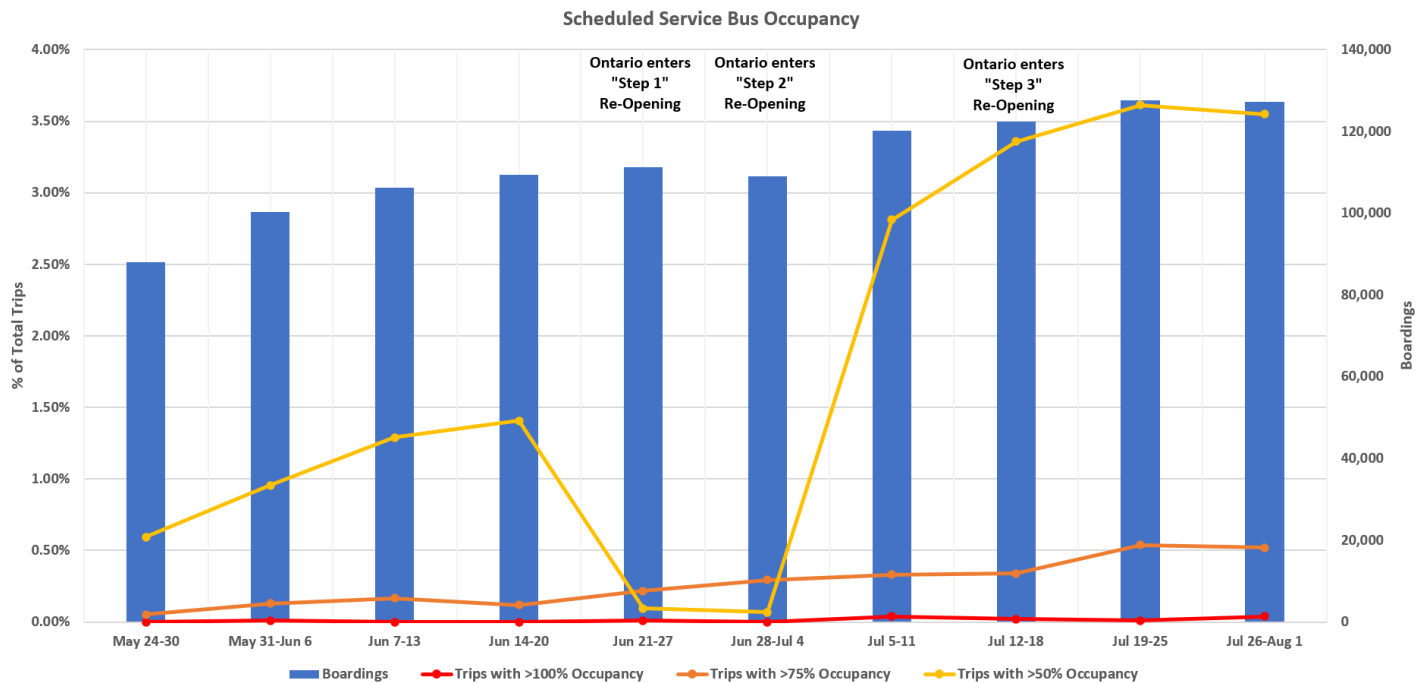
Service availability decreased marginally to 99.4 per cent, 0.2 per cent lower than 2020 and slightly below the target of 99.5 per cent.

Action Plan

Service Planning staff have completed recent run time analysis to update schedules to reflect actual trip running times which are expected to improve overall OTP.

Service availability is impacted by unplanned events such as on-street conditions impacting service delivery (collisions, detours, etc.) and mechanical defects. Maintenance staff continue to enhance vehicle maintenance activities to mitigate on-street defects, as demonstrated in the Mean Distance Between Defects metric, and operations management continue to use available on-street resources to cover service when unplanned event happen.

Scheduled Service Maximum Bus Occupancy



Definition

Maximum bus occupancy is a measure of the maximum number of riders on a scheduled service vehicle at any point of a trip, currently expressed as a percentage of the seated capacity. The data accounts for the differences in capacity for regular and articulated buses.

For planning purposes, maximum capacity is considered the vehicle seating capacity during the pandemic recovery period. There are no mandated/legislated bus passenger capacity limit and at times capacity on a trip may exceed the maximum seated capacity.

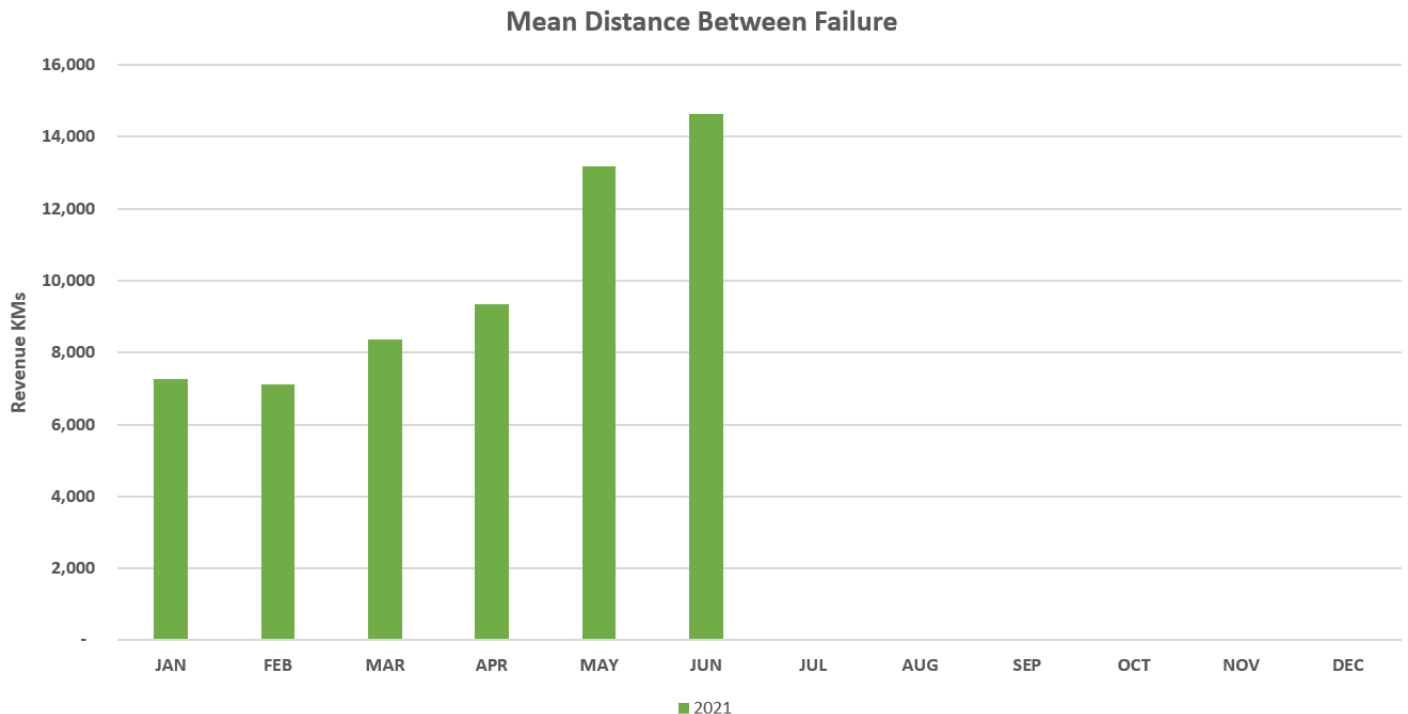
Results

During the last two weeks of July, maximum occupancy was below 50 per cent of seated capacity for approximately 96.5 per cent of all trips, with only 0.5 per cent of trips exceeding 75 per cent seated capacity.

Action Plan

The transit network continues to provide adequate capacity for current customer demand. As ridership increases into the fall, DRT will continue to monitor bus occupancy and implement operational controls to increase route capacity where appropriate.

Mean Distance Between Failure (conventional)



Definition

Mean Distance Between Failure (MDBF) measures the reliability of the fleet by tracking the mean distance between bus breakdowns or mechanical failures that result in cancelled or missed service. A bus breakdown or mechanical failure is any incident that precludes a revenue vehicle from completing its trip or beginning its next scheduled trip, and is measured by the total number of revenue vehicle kilometers (conventional service fleet) divided by the total number of chargeable vehicle defects during the reporting period.

Chargeable vehicle defects (or chargeable mechanical failures) are consistent with guidelines from the Ontario Public Transit Association (OPTA) and does not consider failures resulting from passenger-related events (i.e. sickness on the bus), farebox or other technology defects such as PRESTO readers.

Service impacts resulting from bus breakdowns are mitigated by assigning an available bus or reassigning a bus from a lower priority trip, to cover all or a portion of the affected trip(s).

Results

MDBF continued to steadily improve, increasing to 14,464 km for June.

Action Plan

DRT will establish an appropriate MDBF target at the end of 2021 with the objective to continuously enhance preventative maintenance practices and improve annual MDBF performance.

1. Service & Fare Integration Table

The Fare and Service Integration (FSI) Provincial-Municipal Table consists of senior representatives from transit systems within the Greater Toronto Hamilton Area (GTHA) and the broader Golden Horseshow area. The Table will work together to develop recommendations, guiding principles, and considerations for fare and service integration (FSI) design and in other areas identified by the members as necessary to improve transit and the rider experience in order to make significant progress. The Table is intended to be a problem-solving body that explores ideas and enhances collaboration between the Ministry of Transportation (MTO), Metrolinx, transit systems and other transit-focused organizations.

The Honourable Stan Cho, Associate Minister Ministry of Transportation, is the new Chair of the Table, replacing Ministry Surma who was recently appointed Minister of Infrastructure.

The cross-boundary service integration program initiated by TTC, Brampton Transit, DRT, Mi-Way and York Transit, has recommended a three-phased program to eliminate duplication of service on common corridors within Toronto and provide a one-bus service for riders crossing the 905/416 boundary. The program is based on two principles: agencies operating open door within Toronto to enable customers to access 905 transit agency buses within the City of Toronto for local travel, and to match capacity with demand by coordinating schedules between TTC and 905 transit agencies, to remove duplication and optimize transit capacity. The grass roots program will result in more frequent service for customers, financial efficiencies to reallocate service to other priority areas, reduced emissions of green house gasses, and a model for future service integration including specialized transit services.

TTC data suggests that 13 per cent of TTC customers start or end their trip in the 905, with 4.3 per cent using local 905 transit agencies; 0.1 per cent of these customers use DRT. For local travel within Toronto, 905 transit agency buses cannot be used by TTC customers due to legislative barriers, despite available capacity and operating on the same roadways as TTC buses. The 905 transit services are prohibited from serving customers and must operate “closed doors” within Toronto. A “closed door” operation means that when travelling into Toronto from Durham, DRT can only drop-off customers within Toronto (no pick-ups in Toronto), and when travelling from Toronto into Durham, DRT can only pick-up customers (no drop offs in Toronto) travelling into Durham.

Integration of services within Toronto will require legislative changes to enable 905 transit agencies to deliver services within the City of Toronto, and a resolution of fare collection technology for non-PRESTO customers. In order to deliver cross-boundary Service, changes to the *City of Toronto Act* are required which will remove the limitation to allowing other public passenger transportation organizations to enter into agreements with the TTC to better coordinate services across municipal boundaries.

Two routes have been identified to pilot the service integration program as part of a Phase 1 deployment: Dufferin North (York Transit) and Burnhamthorpe (Mi-Way). The Ellesmere and

Shephard corridors are scheduled for Phase 3 of the program pending the outcome of the pilot. Pending approval by the Province and the local municipalities, phase 1 of the pilot program is planned for fall 2021.

2. DRT Trips to Vaccine Clinics

For the week ending August 8, 2021, 499 free trips (189 trips with Specialized Services, 310 Trips with On Demand) have been delivered to/from COVID-19 vaccination clinics across the Region thanks to a generous donation from Ontario Power Generation. Free trips using DRT's demand responsive services continue to be available to all residents. Information and details are available on DRT's website (durhamregiontransit.com), or by contacting a DRT customer service representative by telephone (866-247-0055).

3. Reminder – September Service Updates

Several service enhancements were implemented September 7, 2021.

1. New Route 392: Oshawa Centre – Ontario Shores, providing limited weekday service to access Lakeridge Health Whitby, Ontario Shores, and Abilities Centre
2. Enhance Route 407: Harmony Terminal – South Oshawa, increasing access to South Oshawa Industrial area
3. Reintroduce Route 411: Oshawa Centre – South Courtice, increasing access to South Oshawa Industrial area and Pereyma and Holy Trinity secondary schools, replaces temporary On Demand service in South Courtice
4. Enhance Route 901: North Campus – Oshawa Centre: Increasing access to the Oshawa Centre on weekday evenings and weekends
5. Enhance Route 905: Whitby Station – Harmony Terminal – Uxbridge, additional evening trips to Uxbridge on Saturdays, increasing access to GO Lakeshore East and Whitby GO Station
6. New Route 920: Toronto – Amazon Ajax – North Campus, new cross-regional route connecting to TTC Rapid Transit Network Line 3 (McGowan Station) and employment (Amazon Distribution Centre, Sheppard East Industrial) and post secondary (Centennial College, North Campus) destinations
7. New Overnight Mobility: New mobility options for 24/7 service including PULSE 900 (Morningside to Simcoe) and 901 (King to North Campus). On Demand available within urban areas connecting to scheduled service and GO rail stations.

4. 100,000 On Demand rider

The countdown is on! To celebrate Durham Region Transit's (DRT) appreciation for customers using On Demand service, the 100,000th rider will be gifted a pre-loaded \$500 PRESTO fare card that can be used on all DRT services within Durham Region.

As of August 5, 2021, 90,000 customer trips were delivered since September 20, 2020.

5. Continued COVID-19 safety precautions

DRT continue to require compliance to COVID-19 safety and precautionary measures.

- Everyone in a DRT revenue service vehicle is required to wear a mask or face covering, except where the person is required to be accommodated as specified by the applicable provincial legislation.
- Passengers are also expected to:
 - not travel on a DRT vehicle when presenting symptoms associated with COVID-19 or have had close contact with someone who has tested positive for COVID-19
 - review and follow the passive screening protocol posted on the front of the vehicle before boarding
 - use contactless are payment where possible
 - remain behind the yellow line of the bus while in service
 - use hand sanitizer
 - respect respiratory etiquette at all times

6. The modern U-Pass

Durham Region Transit (DRT) will be resuming the U-Pass with Durham College, Ontario Tech University and Trent University for the 2021-2022 academic year. In collaboration with Metrolinx and partner institutions, a new electronic U-Pass is being introduced for the fall semester.



This modern app-based U-Pass replaces the legacy student pass system and required extensive resources to administer and manage.

Eligible students can use the electronic U-Pass either through the PRESTO e-ticketing app, or students without phone will use a PRESTO card with the concession and pass loaded. The U-Pass will be valid on DRT services only and will not be accepted on connecting transit services.

The PRESTO e-ticketing app will enable post-secondary students to use their Android and Apple devices to activate and present their U-Pass pass when boarding DRT. These electronic passes are expected to be used by most students and will have the same built-in security features as the regular electronic tickets and passes, with horizontal and vertical moving text and images; as well as a “tap” feature, which ensures it is a live and valid fare (and not a screenshot or video recording).

The PRESTO U-Pass will provide DRT with valuable ridership and service information to monitor and evaluate the U-Pass program, including specific boarding data across the network, an understanding of actual U-Pass ridership, and the relative value of the U-Pass rate. The PRESTO U-Pass also supports the high-level of PRESTO adoption in Durham required by the operating agreement signed with Metrolinx.

1. Public Vehicles Act Repealed, deregulation of intercommunity bus service

Effective July 1, 2021, Ontario has deregulated the intercommunity passenger transportation vehicle (PTV) sector. As a result, providers in Ontario that deliver intercommunity PTV services across municipal borders for compensation no longer require a public vehicle operating license to provide services on a specific route. According to the Ministry of Transportation, deregulation is intended to make it easier for new carriers to step into the marketplace and address service gaps for passengers and lead to better transportation for Ontarians.

Intercommunity PTV providers are required to follow updated safety, insurance, customer service and reporting requirements that were transferred from the Public Vehicles Act to the Highway Traffic Act under Ontario Regulation 418/21, Passenger Transportation Vehicles.

In collaboration with the Ontario Public Transit Association (OPTA), DRT participated in several information and feedback sessions with the Ministry of Transportation during the consultation period to ensure the interests and concerns of public transit providers were thoroughly considered.

No changes were made to existing municipal authority to operate public transit vehicles within its respective municipal boundaries. Municipalities also continue to be permitted to impose business licensing by-laws and requirements on private carriers for trips where passengers are picked up and dropped off within the boundaries of the municipality.

Within the new regulatory framework, DRT will be exempt from certain intercommunity PTV regulations, including:

- Annual reporting requirements to the ministry, such as routes, schedules, ridership, and vehicle fleet profiles; and
- Notifications of discontinuance of services and service changes.

The MTO will continue to work with transit providers to modernize the regime for standing passengers, to ensure passenger safety while complementing the objectives of service integration and a connected municipal transit regime.

2. Federal Zero Emission Transit Fund (ZETF) Program

On August 9, 2021, Infrastructure Canada announced the \$2.75 billion Zero Emission Transit Fund (ZETF) Program, a five year national program to support communities to invest in zero emission public transit and school transportation options by switching to cleaner electrical power and supporting the purchase of zero emission vehicles and infrastructure. The funding is part of the \$14.9 billion federal investment in public transit over eight years and supports the government's commitment to help purchase 5,000 zero emission buses over the next five years.

The Canada Infrastructure Band (CIB) also committed to complementary funding of \$1.5 billion for zero emission buses through its three-year Growth Plan.

Staff are working through the complete details of the program, and there two ZETF components under which projects are eligible for funding:

- Planning and Design Projects: Eligible projects include studies, modelling and feasibility analysis that will ensure that transit operators have established a comprehensive electrification plan and are prepared to submit applications for capital projects under the ZETF.
- Capital Projects: Eligible capital projects include Zero Emission Buses (ZEBs), charging and refueling infrastructure, and other ancillary infrastructure needs. ZEBs are vehicles that have the potential to produce no tailpipe emissions such as battery-electric and hydrogen fuel cell powered vehicles. They may still have a conventional internal combustion engine but must be able to operate without using it. Retrofits of conventional fuel buses to ZEBs are also eligible.

Eligible capital expenditures can include:

- Procurement of ZEBs;
- Charging/Refueling equipment; and
- Construction or improvements to new facilities

Ineligible expenditures are generally consistent with other funding programs, and there are other specific ineligible expenditures.

- Purchase or maintenance of diesel buses.
- Compressed natural gas rolling stock and infrastructure reliant on fossil fuels.
- Renewable natural gas production, off site Hydrogen production and power generation facilities; and costs associated to the transportation of zero emission fuels.
- Light- and medium-duty vehicles not oriented toward passenger transport (e.g., service trucks).
- Hybrid buses.

The application-based ZETF is a separate fund from the Investing in Canada Infrastructure Program funding investment in transit-related capital and infrastructure.

DRT recently signed an agreement with HRD Ltd, to complete the project supporting the planning, design, and timeline for DRT's transition to a zero-emission transit fleet. This work is highlighted in report 2021-DRT-22. This project will not be eligible for funding since expenditures related to agreements signed prior to approval of ZETF funding, are ineligible. Delaying this work may have significant impacts to the timely transition to zero emission buses and may limit access to capital funding available through the ZETF program for vehicle and infrastructure expenses. The ZETF is a new program and the processing timeline for application approvals is unknown. Recent approvals through the ICIP program were received 18 months or more after applications were submitted. Further, it will be important to secure funding to ensure timely orders of buses based on the limited manufacturing capacity for ZEBs.

This project will position DRT to respond to the technical application requirements and to begin to submit applications for vehicles and infrastructure in early 2022.

3. Demand Response Service Study

In February 2021 the Government of Ontario, through the Audit and Accountability Fund, approved funding of up to \$100,000 towards the Durham Region Transit Demand Responsive Transit Study for the cost of an independent third-party reviewer to deliver a final report with specific and actionable recommendations for cost-savings and efficiencies by October 15, 2021.

EY was the independent third-party reviewer selected for this work. Consistent with DRT's application, the objective of the work was to make findings and recommendations to help DRT:

1. Ensure compliance with the *Accessibility for Ontarians with Disabilities Act* requirements specific to Specialized Services.
2. Reorder demand responsive services (On Demand and specialized services) as required to be client centric and outcome focussed.
3. Ensure that equity of access of Specialized Transit is comparable to scheduled and On Demand service models.
4. Recalibrate the roles and responsibilities of parties throughout the transit system.
5. Identify opportunities for efficiencies and value.
6. Ensure the service model aligns with the strategic priorities of the Region and DRT.

The successful launch of DRT's On Demand service in September 2020 enabled customers in low ridership zones to plan and book their trip in real-time and access a frequent and reliable transit service regardless of where they live, work or travel within the Region. Staff quickly recognized the opportunities and synergies with specialized services that would enable all customers to benefit from a unified demand response service model that's customer-centric, equitable, and seamless.

Staff will submit the final report and recommendations at the October 2021 TEC meeting.

The DRT Demand Responsive Transit study will provide DRT a roadmap of sequenced implementation activities to guide actions and key milestones to ensure demand responsive service is equitable, customer-focused, and reliable.

4. DRT staff are exceptional

DRT is extremely proud of the dedication and commitment demonstrated every day by employees. Service excellence is embedded in all aspects of the organization as demonstrated by recent feedback from our valued customers.

“I called customer service this morning to query what buses are available to me, a senior who uses a walker to get to the area with the Canadian Tire store. This gentleman took his time to help me out and gave me the number of the bus that would get me within that area. He never became frustrated or annoyed and really should be recommended for his patience, kindness and thoughtfulness.”

“This compliment is for both the driver and reservationist. I never had two people be more kind to me in my whole life and without their help I wouldn’t have been able to get home, also the driver was nice, and the reservationist pulled it off.”

“I took my three-year-old daughter on her very first bus ride. The driver made her feel very comfortable and excited about taking the bus. The ride was smooth, and it was an overall very positive experience. Thank you.”



The Regional Municipality of Durham Report

To: Durham Region Transit Executive Committee
From: General Manager, Durham Region Transit
Report: #2021-DRT-20
Date: September 8, 2021

Subject:

The Route Ahead, Durham Region Transit 2022-2025 Service Strategy

Recommendation:

That the Transit Executive Committee recommends:

- a) That the 2022-2025 Service Strategy, The Route Ahead, be approved; and
- b) That the 2022-2025 Service Strategy be funded through the annual Durham Region Transit Business Plans and Budgets.

1. Purpose

- 1.1 The purpose of this report is to seek approval from the Transit Executive Committee (TEC) for the Durham Region Transit (DRT) 2022-2026 service strategy.

2. Background

- 2.1 In 2016, DRT launched its latest Five-Year Service Strategy to guide the development of the transit service between 2016 and 2020. Major themes included the establishment of a high frequency network as the foundation of the transit services, minimum 30-minute route headways, improved span of service and availability with additional early morning and late-night trips, service to new growth areas as soon as possible and aligning transit services to be as direct as possible to improve travel times.
- 2.2 In 2019, DRT initiated a review of transit services in the rural areas of the Region. The review assessed available mobility options, forecasted transit demand, and

service delivery models and technology platforms used in similar jurisdictions. Several recommendations and an implementation plan were developed to enhance the mobility of residents in the rural areas.

- 2.3 In 2020, the COVID-19 pandemic had a significant impact to transit ridership across the Province; at the lowest point, DRT ridership decreased by 73 per cent compared to the period in 2019. To adapt and ensure all residents could access public transit, DRT launched a Ridership Recovery Framework in September 2020. The revised network concentrated frequent transit service on several key routes which accounted for 98 per cent of ridership and implemented On Demand transit services in areas of low demand across the entire Region. On Demand transit service provided access to a flexible mobility options connecting residents to the frequent transit network, a GO Transit rail station or to any stop within their zone.
- 2.4 The three-year Route Ahead plan will influence transit services during the pandemic recovery period as DRT rebuilds ridership, adapts service to new and emerging travel behaviours, and build the foundation for future service growth.
- 2.5 By 2026, transit ridership is expected to approach pre-pandemic levels and DRT will begin to realize positive outcomes from recent strategic transportation investments such as the GO Train extension to Bowmanville, a new zero-emission bus garage in north Oshawa to support the transition to a zero-emission fleet and opening of new sections of the centre-lane Durham-Scarborough Bus Rapid Transit (DSBRT) that will improve service reliability. The next five-year service strategy, 2026-2030, will support a modern transit network connecting with expanded GO Train service, the return to record annual ridership, and the transition to zero-emission vehicles.

3. Previous Reports and Decisions

- 3.1 #2016-DRT-03, DRT Servicing and Financing Study, Five Year Service Strategy.

In February 2016, TEC approved the implementation of the recommendations and strategy objective to develop a transit system that was to be available, consistent, direct, frequent, and seamless, to provide Durham Region residents and visitors with an attractive alternative to the personal car.

- 3.2 #2020-DRT-12, Review of transit services in rural Durham

In June 2020 TEC approved the implementation of the recommendations and strategy outlined in report #2020-DRT-12.

- a. Replace scheduled services in low demand areas of rural areas with On Demand service.
- b. Adopt a scalable advanced technology platform that is complementary with and has the capability to schedule and dispatch both Specialized Services and On Demand trips in coordination with the scheduled service network to provide efficiencies through integration of services.

3.3 Ridership Recovery Initiative Update Transit Network Presentation, July 8, 2020, Transit Executive Committee.

DRT's Ridership Recovery Plan introduced On Demand in the urban area as part of the Phase A service plan for September 2020 as part of several service changes to adapt the transit network to the realities of the COVID-19 pandemic and establish a sustainable and scalable network to support economic recovery and increasing ridership.

The Phase A service plan enabled DRT to enhance access to public transit by increasing frequencies on the frequent transit network and core routes, adjust service to new and emerging travel patterns, and providing access to public transit for all residents regardless of where they live, work or travelled within the Region.

4. Discussions

4.1 The Route Ahead service strategy is based on five principles.

- a. Availability: provide access to transit service across the entire region and at all hours of the day.
- b. Innovation: enhance the customer experience and journey with modern tools and technology.
- c. Reliability: provide mobility that is frequent and on-time, and supports evolving travel needs and patterns.
- d. Safety: focus on the customer travel and safety experience onboard vehicles and at stops and terminals.
- e. Growth: service is available in new communities as soon as possible so residents have access to transit when they move-in.

4.2 Customer markets

- a. Existing: The post-secondary market and travel to Toronto's central business district (CBD) each represented 25 per cent of daily boardings prior to the pandemic. Post-secondary travel is expected to return in Fall 2021 as in-class learning resumes. Travel to Toronto's CBD is not expected to fully resume in the short term and the oversupply of free parking at GO Stations will likely impact DRT ridership negatively. The remaining market is made up of travel within Durham: work, shopping and leisure, and high school; these are expected to gradually increase as the province moves forward with its reopening plans.
- b. New travel markets: The Route Ahead strategy will establish new partnerships and service offerings that reinforce resiliency in the transit network and increase ridership. Actions include access to recreational centres, targeting employment centres, overnight travel and where possible greater service integration with the GO Transit, the Toronto Transit Commission, and York Region Transit.

4.3 The Route Ahead: Service Strategy 2022 to 2025 (Attachment #1)

- a. Transit Service
 - Design

In addition to quality, frequency and speed of service, the environment in which transit service operates influences success. Establishing routes that provide access to destinations and travel through mixed uses are essential to improving frequency and availability of a scheduled service. This includes route directness and efficient access to transit stops through active transportation connections.
 - The Network

The transit network in Durham Region comprises various transit services that form one comprehensive transit network.

 - (i) Rapid Transit

The Route Ahead will guide services as the GO Lakeshore East Rail extension is commissioned, providing seamless connections from residents' neighbourhood transit stops to destinations across the Greater Toronto and Hamilton Area.

The successful PULSE rapid bus service will also be extended to the 902 King, 915 Taunton and 916 Rossland routes. This will expand frequent service to more areas of the region to align with the Region's Transportation Master Plan and Metrolinx's Regional Transportation Plan.

(ii) Base and GO Connect Routes

Base and GO Connect Routes will be launched along corridors connecting destinations with GO rail services where demand supports a base 30-minute service.

(iii) Demand Response

Demand response service will provide flexible mobility to all areas of the region where demand cannot sustain 30-minute scheduled service.

(iv) Local Area Transit Plans

Focused on specific areas within the Region where the urban fabric continues to develop, the Local Area Transit Plans (LATP) will provide residents a view of the future state of transit service as the area matures.

A full engagement strategy will be used to consult with municipalities, residents, and businesses to develop the future transit plans. Plans will be developed for the following areas:

- Bowmanville (Clarington)
- Newcastle (Clarington)
- Courtice (Clarington)
- Kedron & Windfields (Oshawa)
- Port Perry (Scugog)
- Seaton (Pickering)
- Brooklin (Whitby)

b. Infrastructure

The customer experience is influenced by the service delivered and the infrastructure that supports the journey.

- Stations, terminals, and hubs provide convenient on street transfer points between scheduled and demand response services, including customers who are eligible for specialized services. The Route Ahead will influence this infrastructure to support effective connections between scheduled routes, demand responsive services, and active transportation networks.
- Transit Priority: Transit priority measures improve transit reliability by moving buses efficiently, making the journey faster for customers and reducing resource requirements to operate similar service levels. The Route Ahead will identify and develop tools to deploy transit priority measures that support transit.
- Supporting infrastructure: Most transit customers begin or end their trip as a pedestrian, using a bike, or other emerging mobility options. Providing high quality customer information, wayfinding, and infrastructure is instrumental in an easy to use and accessible transit system.

5. Relationship to Strategic Plan

5.1 This report aligns with/addresses the following strategic goals and priorities in the Durham Region Strategic Plan:

a. Environmental Sustainability

- Expand sustainable and active transportation

b. Economic Prosperity

- Position Durham Region as the location of choice for business
- Enhance communication and transportation networks to better connect people and move goods more effectively

c. Service Excellence

- Optimize resources and partnerships to deliver exceptional quality services and value

6. Conclusion

6.1 The Route Ahead, 2022-2025 Service Strategy, will inform the planning and implementation of transit services during the pandemic recovery period to support enhanced access to mobility that meet the needs of Durham residents and business.

6.2 For additional information, contact: Christopher Norris, Deputy General Manager Operations, at 905-668-7711, extension 3752

7. **Attachments**

Attachment #1: The Route Ahead: Durham Region Transit Service Strategy
2022-2025

Attachment #2: The Route Ahead Deployment Plan

Respectfully submitted,

Original signed by

Bill Holmes
General Manager, DRT

Recommended for Presentation to Committee

Original signed by

Elaine C. Baxter-Trahair
Chief Administrative Officer

The Route Ahead

Durham Region Transit (DRT)
Service Strategy 2022 – 2025

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Durham Region Transit's Vision, Mission, Principles and Values

Vision

The public chooses DRT service because it is convenient and meets their mobility needs.

Mission

To deliver efficient and effective mobility solutions across the Region of Durham in the most sustainable way possible.

Principles

- Every customer trip counts.
- We provide value to customers, our stakeholders, and our community.
- We provide customer-centric integrated services that enable independent, spontaneous and worry-free travel.
- We are accountable for decisions and transparent in sharing successes and failures.
- We mitigate the environmental impact of our operations.

Values

Committed to serving our local communities, DRT shares the core values outlined by the Region:

- **Leadership:** We demonstrate integrity and vision, providing the organization with good governance and management.
- **Effectiveness:** We anticipate the changing needs of the community and provide services within a framework of financial stability and transparency.
- **Innovation:** We support life-long learning and commitment to ongoing research, knowledge exchange, and continuous quality improvement.
- **Inclusion:** We provide an accessible, inclusive environment that values the diversity of our staff and the community.
- **Environmental Responsibility:** We prioritize community leadership and environmental sustainability in our operations.
- **Service Excellence:** We encourage professional excellence through collaboration, partnerships and teamwork in a culture that fosters trust and respect.

Foreword

Following record-setting ridership in 2019 and the first two months of 2020, pandemic related measures began impacting ridership on March 16, 2020.

The COVID-19 pandemic resulted in a new reality for transit services across the province as most residents stayed home from work and school. While ridership fell by up to 73 per cent, thousands of essential workers—who sustained our communities—continued to rely on DRT, each day, to safely travel to their jobs. DRT also continued to serve residents travelling to essential medical appointments and retail locations.

The demand for public transit is expected to gradually recover to pre-pandemic levels. Based on available data, DRT estimates ridership to recover considerably by 2025 (Figure 1).

While five-year service plans are the norm, this three-year plan will cover what is expected to be the pandemic recovery period, leading into an exciting DRT future. By 2026, DRT will begin to realize positive outcomes from recent strategic transportation investments made by the Region:

- completion of the GO Transit train extension to Bowmanville;
- a new zero-emission bus garage in north Oshawa to support the transition to a zero-emission fleet;
- new sections of the centre-lane Durham-Scarborough Bus Rapid Transit (DSBRT) coming online;
- and the first year of the post pandemic five-year service plan.

The Route Ahead will guide transit service planning for the next three years as DRT looks to rebuild and regain ridership during the pandemic recovery period; adapt services to new and changing travel behaviour; and build the foundation for future growth.

Compared to transit systems in Ontario with comparable populations, the level of transit service delivered in Durham Region has historically been below-average (Figure 2). As population and employment grow in Durham over the coming years, it is important to enhance investment in transit to offer additional travel options for residents, deliver a competitive mobility service and ultimately attract new customers.

The Route Ahead positions transit as a viable alternative to single-occupant automobiles and a reliable means of travel for people who do not have a car or cannot drive.

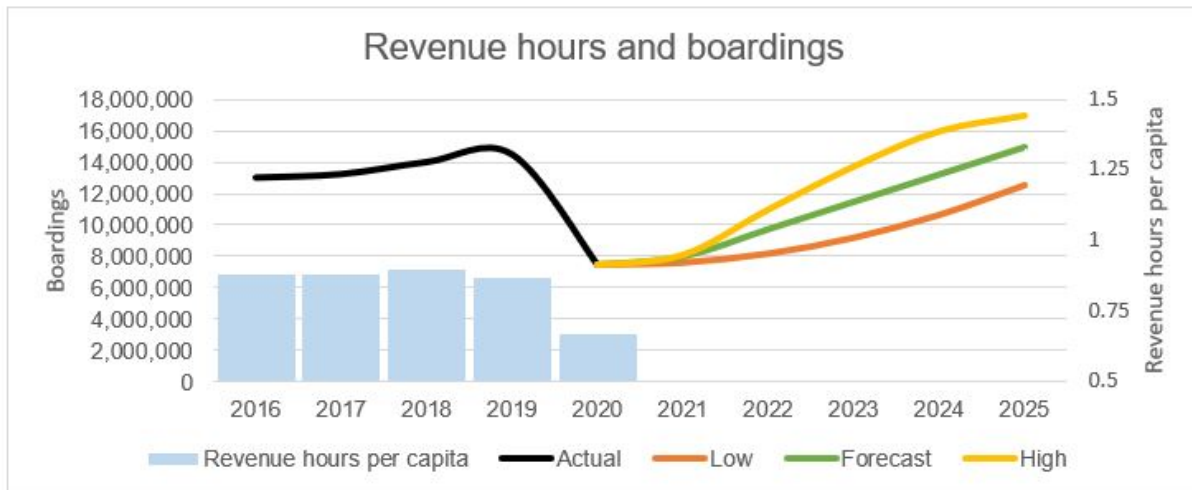


Figure 1: DRT Revenue hours per capita and boardings by year

Municipality	Revenue hours per capita
Brampton	2.0
Hamilton	1.6
Mississauga	2.0
Ottawa	2.6
Waterloo	1.7
York	1.1
Durham	1.0

Figure 2: 2019 Revenue hours per capita comparison among Ontario peer transit systems (Canadian Urban Transit Association)

Pillars

The foundation of the Route Ahead service strategy is supported by five pillars: availability, innovation, reliability, safety and growth.

Availability

Customers can access transit when they need to travel. Service is available in all areas of Durham Region, using a mix of scheduled service and Demand Response service delivery models. Service is flexible and reflects the purpose and volume of travel in urban and rural areas of Durham Region.

DRT endeavours to reduce the average customer wait times for transit in urban and rural areas, 24 hours a day. Scheduled service frequencies on major corridors will be attractive for those with multiple travel options and Demand Response services will be adapted to keep wait times low.

Innovation

The ability to meet customers' evolving needs and trip patterns will require a combination of existing and new strategies.

DRT will continuously adapt its flexible service delivery models to new customer needs and travel patterns. Leveraging technological solutions will be critical for success, as will be increasing access of these solutions for all customers.

Reliability

The service will be flexible to meet and adjust to new travel patterns as customers return to work, school, shopping, and recreational activities.

Transit priority measures will improve reliability by decreasing travel time.

Safety

Safety is central to each customer's journey, be it in a vehicle or at bus stops and terminals.

DRT will improve the customer environment on-board vehicles, at stops, and in stations by leveraging best practices and new solutions.

Growth

The Region of Durham will continue to see growth in residential and employment opportunities, for which new residents and employers will expect transit to be a competitive mobility option.

DRT will endeavour to provide transit-first solutions to new communities so that residents can rely on public transit from day one, and to support the Region's economic development by supporting employment and recreational access.

Supporting Regional Plans

DRT will continue to support initiatives for a more compact, transit friendly Region, including:

- Durham Region's Strategic Plan
- Envision Durham
- Transportation Master Plan
- Metrolinx Regional Transportation Plan
- Greater Golden Horseshoe Transportation Plan

Customer markets

DRT's ridership includes several customer markets, which have been impacted in different ways by COVID-19.

In June 2020 TEC approved the implementation of the recommendations and strategy outlined in report #2020-DRT-12.

- a. Replace scheduled services in low demand areas of rural areas with On Demand service.
- b. Adopt a scalable advanced technology platform that is complementary with and has the capability to schedule and dispatch both Specialized Services and On Demand trips in coordination with the scheduled service network to provide efficiencies through integration of services.

3.3 Ridership Recovery Initiative Update Transit Network Presentation, July 8, 2020, Transit Executive Committee.

DRT's Ridership Recovery Plan introduced On Demand in the urban area as part of the Phase A service plan for September 2020 as part of several service changes to adapt the transit network to the realities of the COVID-19 pandemic and establish a sustainable and scalable network to support economic recovery and increasing ridership.

The Phase A service plan enabled DRT to enhance access to public transit by increasing frequencies on the frequent transit network and core routes, adjust service to new and emerging travel patterns, and providing access to public transit for all residents regardless of where they live, work or travelled within the Region.

4. Discussions

4.1 The Route Ahead service strategy is based on five principles.

- a. Availability: provide access to transit service across the entire region and at all hours of the day.
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- e. Growth: service is available in new communities as soon as possible so residents have access to transit when they move-in.

Trips within Durham Region

Work

DRT provides travel to many employment locations throughout Durham Region, representing approximately 30 per cent of transit trips.

While this market was impacted by the COVID-19 pandemic, the effects were less significant than other markets. This is expected to rebound faster than other markets.

New industrial employment growth—such as Amazon distribution and fulfilment centres opening in September 2021—will contribute to market growth.

Shopping, Leisure and Recreation

This customer market represents 20 per cent of transit trips and is expected to rebound faster than others. Many trips access essential services such as food, shopping or medical appointments.

To make it easier for customers to access recreational opportunities, DRT enhanced services to recreational areas in summer 2021, helping to further rebuild this market and attract additional ridership.

High school students

Accounting for approximately one per cent of transit trips, high school-related travel ceased during large portions of the 2020-2021 school year. DRT initiated a review to better understand the impacts of various student travel scenarios on the DRT network. DRT identified opportunities within existing resources to increase the share of students using DRT for school-related travel to 42 per cent from nine per cent, including adjustments to the Y10 youth 10-month loyalty fare incentive program.

The Route Ahead: 2022 to 2025

While post-pandemic ridership markets remain uncertain, it is expected that ridership will return to 2019 levels by 2025. By 2025, structural changes in travel patterns will be solidified and growth in travel will have replaced any ridership lost by existing customers travelling less.

To support ridership recovery and growth to 2025, DRT will:

- Be innovative in service offerings, enhance the customer experience and seek new ridership markets.
- Work with regional partners to ensure that customers have a seamless and convenient experience using transit.
- Adapt to changes in the travel markets as they occur.

Current customers

Essential trips

Representing approximately 35 per cent of pre-pandemic ridership, many current customers used DRT throughout the height of the pandemic. For many of these residents, DRT remains their sole method of travel to work, appointments and essential shopping.

It is important for DRT to ensure that it offers services that allow all residents, regardless of where they live or their access to an automobile or ability to drive, to fully participate in society.

To support all residents and provide access to transit, DRT will:

- Enhance frequency and access to transit services across the Durham, ensuring DRT services are available to support residents' travel needs and the economic recovery of the Region.
- Expand service to recreational opportunities throughout the Region and in neighbouring Toronto.
- Leverage the Social Equity Guidelines to ensure all residents have equitable access to transit services.

Discretionary trips

Discretionary trips—made by customers with other travel options, such as driving or carpooling—represented approximately 65 per cent of transit trips prior to the pandemic. Whether avoiding parking constraints, traffic, or just wanting to relax during their commute, DRT will need to demonstrate value to regain these customers.

DRT will demonstrate value to customers by:

- Providing more frequent services that make transit an easy travel alternative to the automobile.
- Maintaining competitive fare options.

- Working with our regional partners, such as Metrolinx, on campaigns reinforcing the value of transit services.
- Enhancing the transit network to take customers where they are going in a fast and efficient manner.
- Offering flexibility in travel with different service models.

Developing new travel markets

To position DRT for sustained ridership growth, the following markets were identified as areas where DRT can attract new customers.

Recreational travel

As demand grows in recreational areas, and parking constraints increase at popular locations, DRT will enhance services to key destinations and position DRT as a viable option for recreational travel.

DRT will enhance access to recreational opportunities within Durham, and to regional attractions, by:

- Exploring recreational markets, including access to the Pickering and Whitby waterfronts.
- Working with regional and municipal partners to provide connections between transit services and trail and cycling facilities, such as the Waterfront Trail and the proposed Durham Meadoway.

Employment centres

Most employees travelling from Durham Region to jobs in downtown Toronto use public transit. However, the automobile dominates travel to employment centres in Durham Region, Toronto (outside the downtown core) and in York Region.

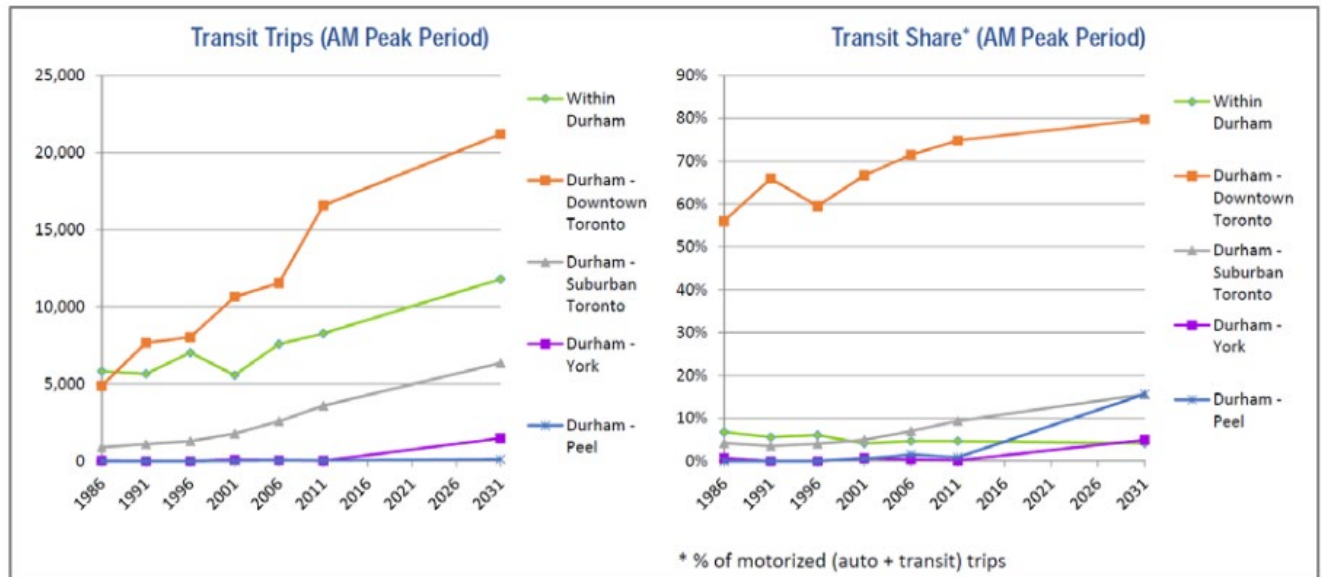


Figure 3: Transit mode share by destination (Durham Region Transportation Master Plan, 2017)

DRT can enhance transit options for travel to non-downtown Toronto areas by ensuring service is attractive, fast and meets the needs of employees in these areas. DRT will:

- Partner with business groups and business improvement associations to promote DRT services.
- Continue to support progress of the Durham Scarborough Bus Rapid Transit corridor to the Scarborough City Centre.
- Review service delivery models between Durham Region and York Region.

Overnight travel

Whether travelling to an overnight or early morning work shift, or to and from late night leisure activities and entertainment, residents require mobility at all times of the day and night. DRT will:

- Expand and monitor 24-hour transit service across the network and make the appropriate adjustments to ensure efficient and effective service for residents.

Travel within Durham

Travel within Durham Region represents the largest travel market. The 2017 Durham Transportation Master Plan found that during the morning peak period, over 50 per cent of work trips remained within Durham Region.

While the number of transit trips was growing prior to the pandemic, the proportion of trips carried by transit for internal trips within Durham Region has remained stable.

Because local journeys within Durham are shorter and do not require the additional fare associated with connecting to other transit agencies, local travel is generally more conducive to transit use.

The transit system needs to support people to travel anywhere-to-anywhere. DRT has made significant changes and investments to provide frequent and available service, and these improvements will encourage customers to make local trips using transit within Durham Region and their local communities. Future actions will include:

- Reviewing how different service offerings, such as Demand Response, can better connect people to where they are travelling locally.
- Marketing the more frequent and available service, to build awareness of how easy transit service is for making local trips.

Social equity: supporting greater access to mobility

To ensure all residents have access to mobility, DRT has created social equity guidelines that apply a social equity lens to service planning decisions.

Service design elements

To create a resilient transit network, several factors are required. These factors are often outside the direct control of DRT, and DRT will collaborate with municipal and regional partners to advance transit supportive development.

Density

The Ontario Transit Supportive Guidelines recommends that 22 units per hectare, or 50 residents and jobs per hectare, as the minimum density at which a basic 20- to 30-minute bus service can be supported. While this is only a recommendation—and there are examples of lower densities supporting high service levels—in general, higher density results in more potential customers for a transit route.

DRT will endeavour to collaborate with local and regional groups to support and promote Transit Orientated Development and transit friendly communities across the Region, including the major transit station areas.

Destinations and mixed uses

A mix of uses and a variety of destinations along a transit corridor produces the best results for high ridership on a route. For example, PULSE 901 Simcoe serves several major destinations including downtown Oshawa, the Lakeridge Health medical area, the Durham College/Ontario Tech University north campus, and various higher density residential and commercial areas in between. This mixture of uses and destinations makes PULSE 901 one of the highest-performing routes in the system: and supports a high level of service.

Today, GO stations within Durham Region are transfer points between DRT and GO Transit services. Surrounded by parking lots, these stations have few uses within walking distance that make them destinations to support transit ridership.

DRT will work with our partners at Durham Region and at local municipalities and Metrolinx, to advance important work in transforming GO stations into hubs and destinations by:

- Supporting the Rapid Transit and Transit Oriented Development Office to ensure DRT services can support high density, mixed use areas around new train stations.
- Working with area municipalities on intensification plans around GO stations.

Direct, easy to understand routing

In order to remain competitive and compete for travel time with an automobile, DRT considers routes that are direct as possible. Although these routes can bring bus stops closer to some destinations, the overall increase in travel time from operating on local roads discourages ridership.

DRT will maximize direct routes where possible and appropriate.

A comprehensive transit network

The transit network in Durham Region comprises various transit services that operate as one comprehensive transit network.

Rapid Transit

GO Transit rail

The GO Lakeshore East rail service provides rapid transit service within and between Durham Region and Toronto. Many DRT services feed into the GO rail line, and Metrolinx is planning for the extension of service from Oshawa to Bowmanville.

DRT is working in collaboration with Metrolinx and our Rapid Transit Office on the design of the Lakeshore East rail service, and integration of DRT services with the extension.

PULSE Rapid Bus

DRT's PULSE routes provide rapid bus service throughout the Region. To improve reliability, PULSE corridors typically feature dedicated lanes or priority transit measures, such as HOV lanes, queue jump lanes or signal priority. Service operates every 15 minutes or better, seven days a week. This allows customers to benefit from enhanced amenities on buses and at transit stops.

PULSE service is currently available on Highway 2, between the Centennial College / University of Toronto Scarborough Campus and downtown Oshawa, and on Simcoe Street, between south Oshawa and the Durham College / Ontario Tech north Oshawa Campus.

Based on the Region's Transportation Master Plan (Figure 4) and development of corridors in the Durham Official Plan / Envision Durham, future PULSE rapid bus corridors will be implemented by 2025:

- Taunton Road, between Westney Road and Harmony Terminal
- King Street East, between Oshawa Centre Terminal and Liberty Street in Bowmanville
- Rossland Road, between Brock Road (Pickering) and Harmony Terminal
- Highway 2 service extended to the Scarborough Town Centre
- Simcoe Street extended to Windfields Farm Drive

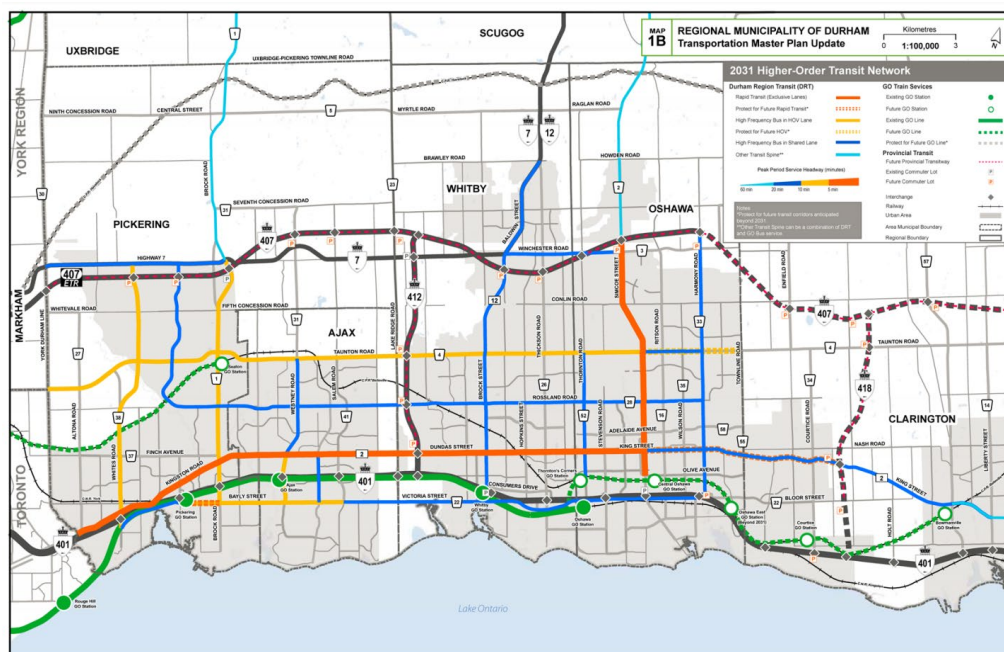


Figure 4: Durham Region TMP (2017) - 2031 Higher-Order Transit Network

Base and GO Connect Routes

These scheduled services operate along busy corridors and in areas where 30-minute service can be sustained at or above the ridership productivity guidelines (see Appendix 1). Base routes operate along major corridors throughout the Region at least every 30 minutes. GO Connect routes are peak-period services that connect residential areas and nearby GO stations, where demand warrants. These services often replace Demand Response services during busy commute periods.

During periods where demand is low, scheduled service may be replaced with Demand Response service. Scheduled service will facilitate cross-regional travel and connect Durham Region with neighbouring York Region and Toronto.

Demand Response

Since September 2020, DRT has operated two Demand Response services: the Demand Response service in rural and low-ridership urban areas for all customers; and Specialized Services, focused on transportation for eligible persons with disabilities who are unable to use conventional transit service. Adopting the recommendation from the Rural Review study in 2019, On Demand and Specialized

Services will be merged as Demand Response services to deliver a seamless and equitable service for all residents.

This change does not impact a customer's eligibility for specialized services through the *Accessibility for Ontarians with Disabilities Act* (AODA). Consistent with AODA policies, there is no change to the delivery of transit services provided to eligible residents.

When scheduled service is not available in some areas, customers will have access to Demand Response for their mobility needs. In urban areas, the Demand Response service will operate stop-to-stop within a zone, or to a scheduled route, terminal, or station. Customers in rural areas will benefit from the same level of service, however pick ups and drop offs are made at the curb. Customers with established eligibility for specialized services will continue to be picked up and dropped off at their original destination.

Local Areal Transit Plans

Local Area Transit Plans (LATP) focus on transit services in specific growth areas of the Region where the urban fabric continues to develop. The plans will provide residents with a future state of transit service and transitional principles to service as the area matures.

A full engagement strategy will be used to work with local municipalities, residents and businesses to develop fulsome LATPs.

LATPs will be developed for the following areas:

- Bowmanville (Clarington)
- Newcastle (Clarington)
- Courtice (Clarington)
- Kedron and Windfields areas (Oshawa)
- Port Perry (Scugog)
- Seaton (Pickering)
- Brooklin (Whitby)

Service and Fare Integration

Travel between Durham Region and the rest of the Greater Toronto and Hamilton Area (GTHA) provides residents access to job opportunities, health services, schools, and leisure activities.

Customers crossing municipal boundaries continue to face barriers to competitive transit service, including:

- Forced to transfer between DRT and other transit providers to continue their journey instead of a one-seat ride.
- Paying a double fare when transferring between DRT and other transit providers, such as GO Transit and Toronto Transit Commission (TTC).

To create a seamless experience for customers, DRT will:

- Explore service options between Durham Region and York Region.
- Continue to work with the provincial table to reduce transfers through enhanced cross boundary services and fare integration between the City of Toronto and outlying regions.

Infrastructure

Stations, Terminals and Hubs

Effective infrastructure is key to providing convenient on-street and off-street transfer points—between and among regional rail and bus service, scheduled DRT routes and demand response services—particularly for customers with limited abilities. A separate initiative will influence how to best leverage this infrastructure for customer transfers between scheduled routes and demand responsive services.

Stations and terminals are the anchor points of the transit system. GO Transit train stations and DRT terminals are generally the busiest locations in DRT's system, where many customer journeys start, end or transfer to another service. DRT does not own any station or terminal infrastructure; several existing terminals are at or near capacity; and stakeholders have initiated planning and design work to expand and improve these facilities. Targeting investment at these locations will benefit most customers.

Hubs will provide convenient on-street transfer points between scheduled and demand response services and active transportation. The active transportation network provides a vital link between a customer's origin and destination and DRT service. Compared to regular on-street bus stops, hubs will include enhanced shelters, amenities and improved on-road facilities to accommodate multiple vehicles and vehicle types. Hubs will be:

- Linked into the surrounding active transportation network and include bike racks.
- Strategically located to allow for easy transfers between scheduled and Demand Response services.
- Designed to accommodate customer accessibility requirements and future mobility opportunities.
- Created in collaboration with our partners on the regional and local cycling plans to ensure cycling infrastructure links with DRT services.
- Accommodating to cyclists, with bike racks installed at select stops across the network with the goal of having most of the urban area within a 10-minute bike ride of the PULSE network.

Bus stops

Bus stops are the first point of contact between customers and the transit service. Transit stops will be enhanced to provide an informative and pleasant environment.

- All bus stops will have a hard surface by 2025.
- Bus stops will link to the active transportation network.

- Shelters will be installed at stops with more than 20 daily boardings and at transfer points between multiple routes. They will also be consistent with DRT's social equity guidelines: installed at sensitive land use locations, such as hospitals and seniors' residences.

Wayfinding and Customer Information

Wayfinding and customer information are the first opportunity for DRT to communicate important information to customers. Its ease of understanding and availability are key to attracting and retaining new customers and to ensure existing customers are aware of changes that may impact their journey.

An updated wayfinding initiative will leverage lessons learned from a Wayfinding Strategy Pilot with Metrolinx and place a priority on social equity and accessibility. The initiative will provide wayfinding and customer information that is easily understood by customers, while reducing barriers to accessing service.

Transit Priority

Transit priority measures provide enhanced speed and reliability for transit services—increasing the competitiveness of transit. Transit signal priority (TSP) makes it easier for buses to travel through intersections, which makes the journey faster for customers. It also helps to reduce resource requirements to operate similar levels of service on routes.

To enhance travel times on busy corridors, DRT has been working with regional partners to implement queue jump stops at busy intersections. Queue jump stops are those that allow buses to by-pass traffic queues at an intersection; using the right-turn lane and far side bus bays.

DRT will continue to advocate for additional transit priority measures at GO train stations. Many DRT routes converge at GO train stations and targeted improvements at these locations will benefit large numbers of customers. Reduced travel time into and out of GO stations will help position DRT as an attractive choice for residents considering DRT for travel to and from GO train stations.

A separate initiative will develop a strategy and tools to determine where, and which type of transit priority measures, should be deployed.

Supporting infrastructure and active transportation connections

High-quality active transportation connections are important to transit ridership. Transit customers begin and end their journeys—to and from their nearest transit stop—by either walking, cycling, or engaging in another form of transportation. Effective connections reduce the need to operate circuitous, low performing bus routes through local neighbourhoods to reach potential customers.

Most transit trips result in a return journey, with transit service operating on opposite sides of the street. A well-connected pedestrian network provides safe and convenient locations where customers can cross busy streets. Where they exist, bus stops are

often co-located with traffic signals. Elsewhere, pedestrian crossovers, mid-block pedestrian signals and other appropriate facilities enhance pedestrian and transit user safety.

To ensure the transit network is accessible to all, DRT will work with:

- Local municipalities to identify gaps in the sidewalk and crosswalk network.
- Regional partners to influence pedestrian network design in new developments.

Mobility is changing fast. Scooters, for example, are becoming more popular in some jurisdictions. DRT is working to better understand emerging mobility options and protecting for these options in the design of future transit and stop areas.

Appendix 1: Service Guidelines

Service deployment guideline

Residents of Durham Region can access transit services throughout the entire area on a 24-hour basis. How the service is delivered to an area varies by time of day and day of the week, to ensure that services are sustainable and implemented in an efficient and fair manner.

The Demand Response delivery model provides base coverage in rural Durham Region and in urban areas when customer demand does not meet minimum ridership productivity for scheduled bus service. The following framework is used when considering transitioning an area to scheduled service from Demand Response:

- Scheduled routes will operate on roads conducive to transit use, such as arterial and collector roads. Service on local roads will be discouraged.
- Ridership projections indicate that the scheduled route will achieve the minimum ridership target (passenger boardings per hour), as outlined in the ridership productivity guideline.
- Newly deployed scheduled service must meet minimum ridership targets within six months.
- Scheduled routes will not operate at headways longer than 30 minutes, nor for periods of the day shorter than three hours.
- Route performance will be regularly evaluated for modification; expansion into new service areas or service periods; or service reduction or transition to or from demand response. The span of service and level of service will be adjusted, based on the customer demand for each route.

Ridership productivity guideline

The ridership productivity guideline provides a measure of the effectiveness of a transit route. As a base service, Demand Response service is provided when scheduled routes are unable to meet minimum ridership productivity targets. Ridership productivity targets are not applicable to the overnight network, because the service provides mobility to groups of customers who may have no other travel option available. Each service type (PULSE, Base, GO Transit Connector and rural) contribute differently to the DRT transit network and each have unique minimum productivity targets. Route productivity varies based on the varying built environments in which each route operates. The following are used for each service type:

- Route Classification average: the average boardings per revenue hour among all routes within the service type and operating period.
- Route Ridership minimum: based on the average boardings per revenue vehicle hour for each individual route within the service type.

Table 1 provides ridership productivity minimums for each route type/classification.

Table 1: Ridership productivity minimums for each scheduled service route type (boardings per hour)

Operating period		PULSE	Base	GO Connector	Rural
Weekday Peak	Class Average	40	25	25	8
	Minimum	30	20	20	8
Weekday Midday	Class Average	40	20	NA	8
	Minimum	30	15	NA	8
Weekday Evenings	Class Average	30	20	NA	8
	Minimum	20	15	NA	8
Saturday	Class Average	35	20	NA	8
	Minimum	25	15	NA	8
Sunday	Class Average	30	20	NA	8
	Minimum	20	15	NA	8

Service frequency guidelines

DRT provides 24-hour transit service seven days a week in urban areas, and service from 06:00 to 24:00 on weekdays and 07:00 to 21:00 on weekends in rural areas. The span of service and service levels varies for each of the Demand Response zones and scheduled routes, based on customer demand. A scheduled route must meet the minimum ridership productivity guideline, which is based on the minimum service frequency at which it is required to operate.

Table 2 presents the minimum service levels for each scheduled route type. In many cases, routes may need to operate more frequently than the minimum frequencies to accommodate higher ridership levels. In these cases, vehicle capacity guidelines are used to determine the service frequency.

Tables 2-4: Minimum service levels for each route type

Weekday		PULSE	Base	GO Connector	Rural	Overnight
Morning peak	05:00 - 08:59	15	30	15	90	N/A
Midday	09:00 - 15:59	15	30	N/A	90	N/A
Afternoon peak	16:00 - 18:59	15	30	15	90	N/A
Early evening	19:00 - 21:59	30	30	N/A	90	N/A
Late evening	22:00 - 24:00	30	30	N/A	90	N/A
Overnight	00:00 - 04:59	N/A	N/A	N/A	N/A	30

Weekday		PULSE	Base	GO Connector	Rural	Overnight
Saturday		PULSE	Base	GO Connector	Rural	Overnight
Early morning	05:00 - 08:59	15	30	N/A	90	N/A
Morning	09:00 - 11:59	15	30	N/A	90	N/A
Afternoon	12:00 - 18:59	15	30	N/A	90	N/A
Early evening	19:00 - 21:59	30	30	N/A	90	N/A
Late evening	22:00 - 24:00	30	30	N/A	90	N/A
Overnight	00:00 - 04:59	N/A	N/A	N/A	N/A	30

Sunday		PULSE	Base	GO Connector	Rural	Overnight
Early morning	05:00 - 08:59	15	30	N/A	90	N/A
Morning	09:00 - 11:59	15	30	N/A	90	N/A
Afternoon	12:00 - 18:59	15	30	N/A	90	N/A
Early evening	19:00 - 21:59	30	30	N/A	90	N/A
Late evening	22:00 - 24:00	30	30	N/A	90	N/A
Overnight	00:00 - 04:59	N/A	N/A	N/A	N/A	30

On the scheduled service network, the minimum service frequency is 30 minutes on urban routes and 90 minutes on rural routes. This results in a customer waiting up to 15 minutes for a bus in the urban area, and 45 minutes in the rural area.

To ensure equity to scheduled service wait times, DRT deploys vehicles to ensure the time between a customer requesting a Demand Response trip and pick up, achieves the following objectives:

- Urban areas: Customers will not wait more than 30 minutes for a pick up, with an average overall wait time less than 15 minutes.
- Rural areas: Customers will not wait more than 60 minutes for a pick up, with an average overall wait time less than 45 minutes.

By 2025, all Demand Response customers, including current Specialized Services customers, will experience similar average trip wait times, including pre-booked trips or trips scheduled in real time. The accommodated rate for trip requests made by eligible persons with disabilities will exceed 99.6 per cent.

Vehicle capacity guideline

The vehicle capacity guidelines provide a level of customer comfort when travelling on DRT. The guideline is used when designing services; however the customer experience may vary due to unplanned operational issues and day-to-day variability in travel demand. These guidelines do not apply to the current vehicle loads implemented in response to the COVID-19 pandemic.

The following guidelines are used when designing the service:

Vehicle type	Off-peak Design Maximum Capacity (100 per cent of seated load)	Peak Period Design Maximum Capacity (150 per cent of seated load)
PULSE 60-foot (articulated)	52	78
PULSE 40-foot	36	54
Base 40-foot	36	54
Demand response sedan, van, minibus	four to 18	four to 18

Vehicle capacity considers the average number of passengers that can be accommodated on a bus during its busiest hour, and most popular point on the route.

Service proximity guideline

Service proximity means the walking distance between dwellings and the nearest bus stop.

In the urban area:

- Dwellings within a 500-metre walk of a bus stop: 80 per cent.
- Dwellings within an 800-metre walk of a bus stop: 95 per cent.

In the rural area, 100 per cent of dwellings will be served by Demand Response at the curb (such as the entrance to a property).

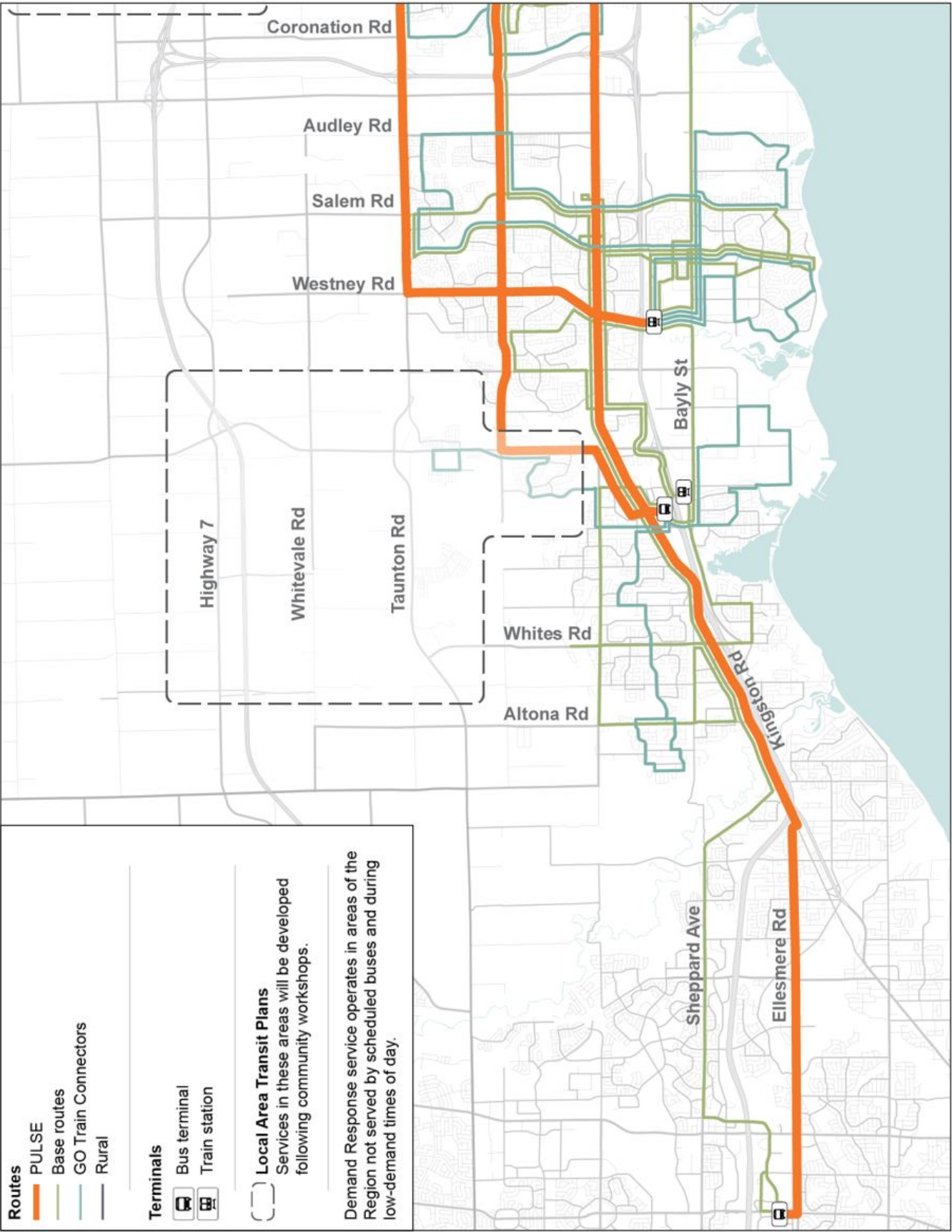
Customers who are eligible for Specialized Services are provided an accessible door-to-accessible-door trip, based on their eligibility. Customers with unconditional eligibility will receive trips using only Demand Response service. Customers with conditional eligibility may receive trips that include travel on a combination of Demand Response and scheduled service.

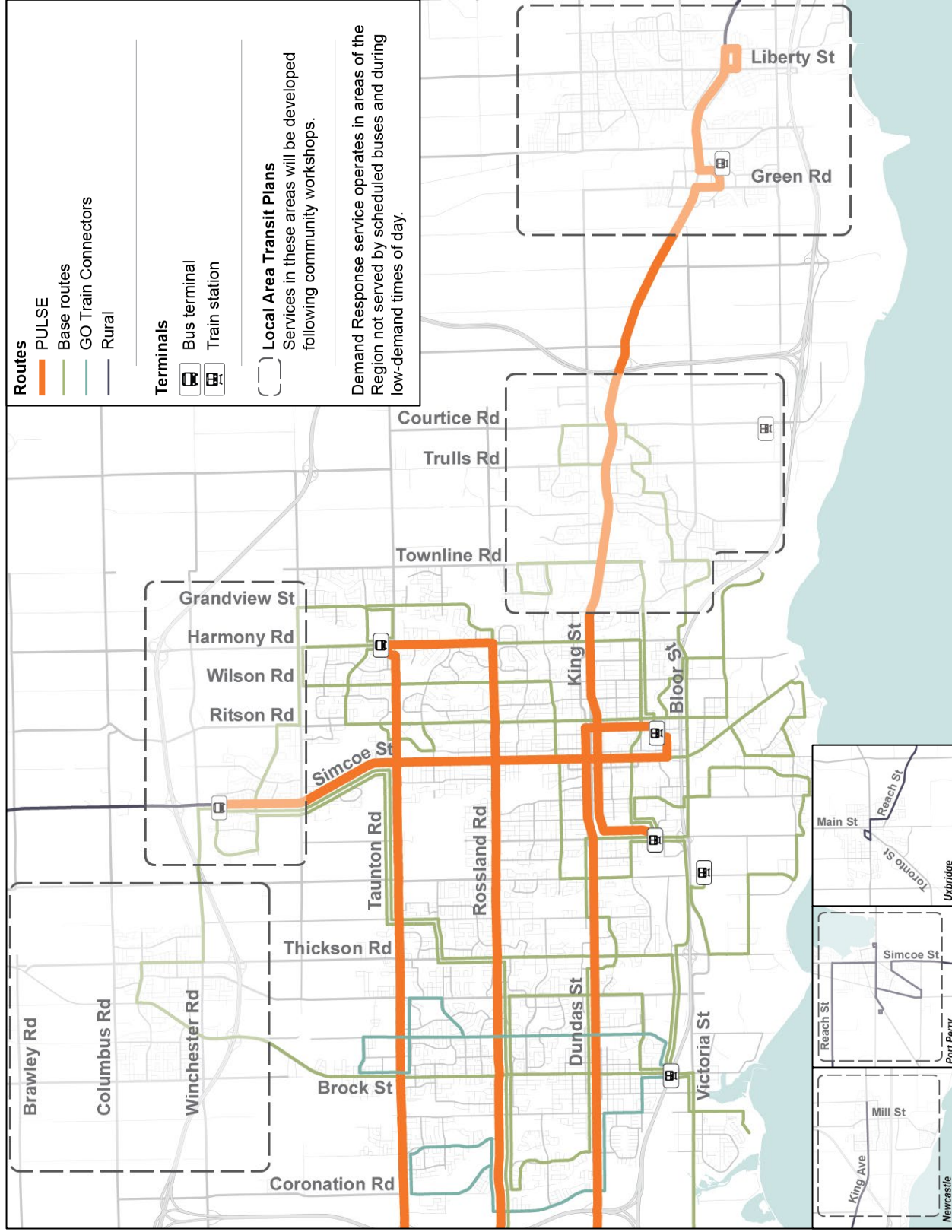
PULSE Rapid Bus Considerations

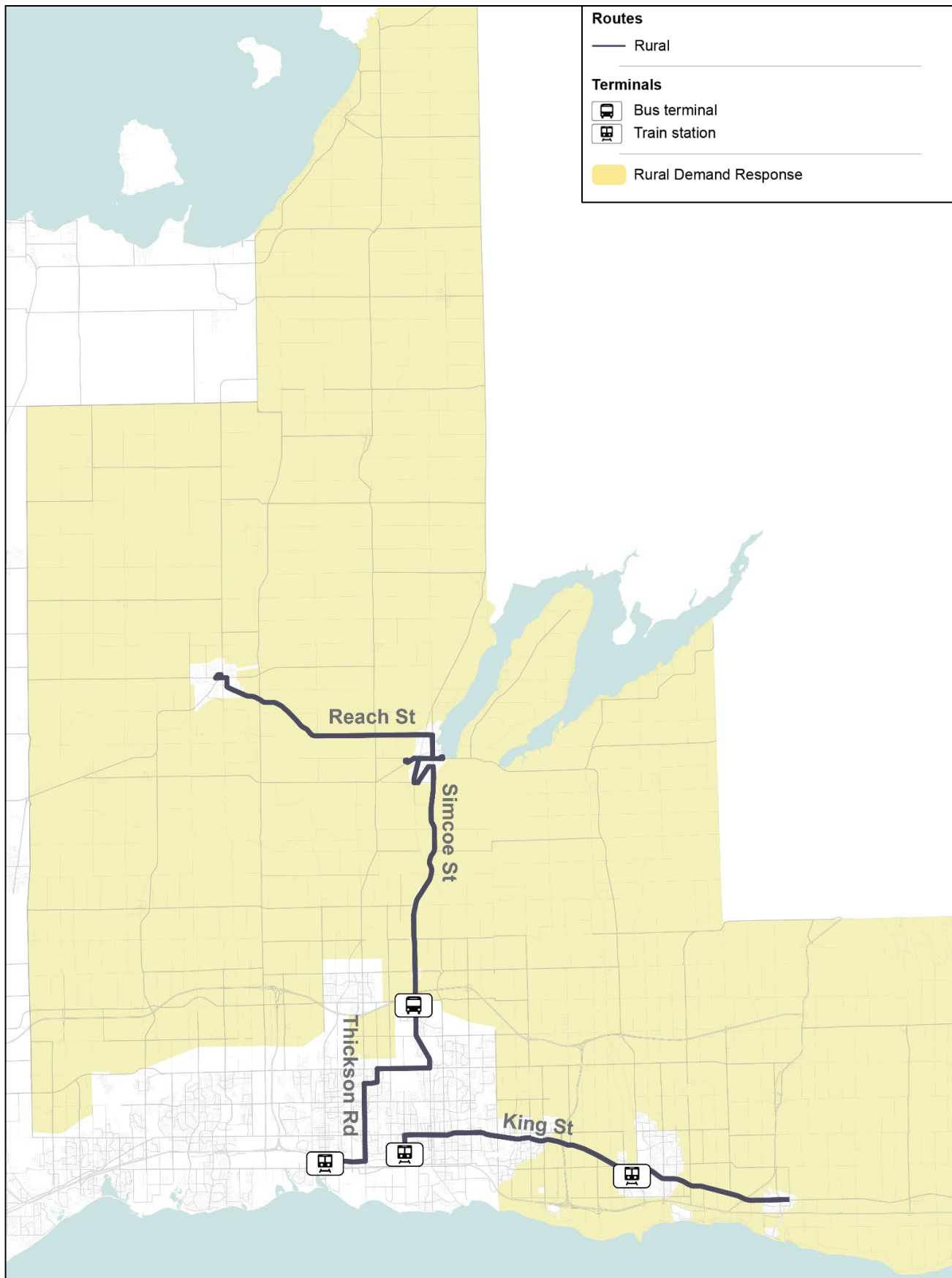
Scheduled services will be considered to transition to the PULSE service type when the following criteria are met:

- The corridor is identified in the Durham Region Transportation Master Plan and/or Metrolinx Regional Transportation Plan as future rapid transit or rapid bus/priority bus.
- Analysis indicates that the service could sustain minimum service headways and meet ridership productivity as defined under the PULSE service type.

Appendix 2: Network Map 2025







The Route Ahead Deployment Plan (2022-2025)

2021

- Service
 - Review and launch additional scheduled route and GO connectors
 - Monitor performance of scheduled and demand response services, implement adjustments to services as required
 - Collaborate with tourism and economic development agencies to identify/update links to recreational and employment destination.
- Infrastructure
 - Initiate Station, Terminals, and Hubs Strategy, including 10-year capital plan
 - Develop necessary upgrades for new park and ride locations in Uxbridge and Scugog (2019 Rural Review recommendations)
 - Initiate discussions with townships of Scugog and Uxbridge to locate new park and ride locations and coordinate budget requirements (2019 Rural Review recommendations)
 - Coordinate with Regional Works for 2022 Budget upgrades to the Shirley Road Park and Ride location (2019 Rural Review recommendations)

2022

- Service
 - Launch Demand Response service delivery model (integration of On Demand and Specialized Services)
 - Launch PULSE 915 Taunton
 - Explore service integration between Durham Region and York Region
 - Review and launch additional scheduled route and GO connectors
- Monitor performance of scheduled and demand response services, recommend 2023 service and budget requirements accordingly
- Infrastructure
 - Commence use of new park and ride locations in Uxbridge and Scugog
 - Commence use of upgraded Shirley Road Park and Ride
 - Deploy terminal and hub infrastructure
 - Deploy supporting customer infrastructure
 - Initiate Transit Priority Measures Strategy, including 10-year capital plan
 - Initiate customer wayfinding strategy and deployment plan
- Local Area Transit Plan
 - Scugog (Port Perry)
 - Oshawa (Kedron and Windfields)

2023

- Service
 - Launch PULSE 916 Rossland
 - Review and launch additional scheduled route and GO connectors
- Monitor performance of scheduled and demand response services, recommend 2024 service and budget requirements accordingly Infrastructure
 - Deploy terminal and hub infrastructure
 - Deploy supporting customer infrastructure
 - Review and deploy additional transit priority measures
- Local Area Transit Plan
 - Pickering (Seaton)

2024

- Service
 - Launch PULSE 902 King
 - Review and launch additional scheduled route and go connectors
- Monitor performance of scheduled and demand response services, recommend 2025 service and budget requirements accordingly Infrastructure
 - Deploy terminal and hub infrastructure
 - Deploy supporting customer infrastructure
 - Review and deploy additional transit priority measures
- Local Area Transit Plan
 - Clarington (Bowmanville, Courtice and Newcastle)

2025

- Service
 - Review and launch additional scheduled route and go connectors
 - Monitor service performance to inform 2026-2030 service strategy
 - Adjust schedule routes as required for new GO Lakeshore East Bowmanville stations, including extending PULSE 900 Highway 2 and PULSE 901 Simcoe to Ritson GO Station
- Infrastructure
 - Commission bus terminals at new GO Lakeshore East Bowmanville extension stations
 - Deploy terminal and hub infrastructure
 - Deploy supporting customer infrastructure
 - Review and deploy additional transit priority measures
- Local Area Transit Plan
 - Brooklin (Whitby)



Durham Region Transit Report

To: Durham Region Transit Executive Committee
From: General Manager, Durham Region Transit
Report: #2021-DRT-21
Date: September 8, 2021

Subject:

E-Mission Zero – Towards Zero Emission Public Transit in Durham Region

Recommendation:

That the Transit Executive Committee recommends

That this report be received for information.

Report:

1. Purpose

- 1.1 This report provides an overview of Durham Region Transit's (DRT's) commitment to transition to zero emission fuels as part of the Region's E-Mission program. DRT is advancing a coordinated suite of initiatives supporting the assessment and deployment of clean technologies aimed at reducing greenhouse gas emissions from public transit in Durham.

2. Background

- 2.1 The 2019 Durham Region Community Energy Plan (DCEP) found that transportation is responsible for more energy use, costs, and greenhouse gas (GHG) emissions than any other source. In March 2021, Council approved the Corporate Climate Action Plan with targets to reduce corporate greenhouse gas (GHG) emissions by 100 per cent by 2045. This includes the transition of corporate fleets, such as public transit vehicles, to low carbon alternatives.
- 2.2 In August 2021 the Region launched the E-Mission program focused on creating a cleaner, low-carbon future by supporting and empowering Durham residents in

making the transition to lower and zero emission vehicles. As part of these efforts, E-Mission Zero is DRT's commitment to adopt zero emission vehicles in its fleet to help reduce overall GHG emissions from the transportation sector in Durham.

3. Previous Reports and Decisions

- 3.1 In November 2019, Regional Council approved the purchase of up to eight electric buses and associated charging infrastructure for a total of \$10.1 million using one-time allotted Federal Gas Tax funds (2019-COW-31). This pilot allows for the assessment of battery electric bus and charging technology, including its performance in local conditions to inform long-term fleet transition and deployment.
- 3.2 In March 2020, the Transit Executive Committee (TEC) authorized DRT to proceed with the launch of an autonomous shuttle pilot in cooperation with partners at the Town of Whitby, Metrolinx and SmartCone Technologies, among others (2020-DRT-07).
- 3.3 In March 2020, Regional Council approved acquisition of property at 2400 Thornton Road, Oshawa, for a future transit facility (2020-COW-3).
- 3.4 In February 2021, Regional Council approved DRT's Business Plans and Budgets (2021-DRT-04), including the 2023 capital forecast of funding for construction of the new transit facility.

4. E-Mission Zero Program

- 4.1 DRT's E-Mission Zero program includes multiple initiatives that are setting the foundation for the transition to zero emission technologies by DRT over the next 20 years. These include:
 - a. Integrated battery electric bus and charging infrastructure demonstration pilot project – DRT is finalizing procurement of its first zero emission battery electric buses and charging infrastructure leveraging \$10.1 million in federal Gas Tax funding for this pilot project. As part of the pilot, DRT is partnering with the Oshawa Power and Utility Corporation (OPUC), using grant funding from The Atmospheric Fund, to assess charging infrastructure design and financing options for DRT's Raleigh depot in Oshawa. DRT is also collaborating with eCamion, leveraging funding from the Canadian Urban Transit Research and Innovation Consortium (CUTRIC), to install and test a newly developed integrated bus charging and energy storage solution. An

update report with recommended next steps on the pilot will be presented to TEC in the Fall of 2021.

- b. WAVE (Whitby Autonomous Vehicle Electric) shuttle pilot project – DRT and the Durham Region Works Department have partnered with the Town of Whitby, Metrolinx, SmartCone Technologies and others to launch an integrated zero emission autonomous shuttle and intelligent infrastructure pilot in 2021. The pilot is receiving funding from the Ontario Centre of Innovation's Autonomous Vehicle Innovation Network. The battery electric shuttle will operate as DRT Route 300 along a six-kilometre route between Whitby Station and the Whitby waterfront. The pilot aligns with DRT's interests in exploring new service models and clean technologies that can provide more responsive, sustainable, and efficient transit options for customers, particularly in areas of Durham that are not suited to full-sized, conventional bus service. Following delays due to the COVID-19 pandemic, the WAVE pilot is expected to begin passenger service in the Fall of 2021.
 - c. Zero Emission Bus (ZEB) fleet and facility feasibility study – DRT has retained HDR through a competitive procurement process to complete a full zero emission fleet and facility feasibility study. The study is expected to be completed in early 2022 and will identify a multi-year ZEB fleet transition, infrastructure, and investment plan. DRT will be reporting back to TEC on the results of the study.
 - d. New flagship net zero Green House Gas (GHG) emission transit operations and maintenance facility – DRT is proceeding with the design and development of a new operations and maintenance facility at 2400 Thornton Road in Oshawa capable of hosting a fleet of zero emission vehicles. This will be a flagship building for DRT and is to mirror the zero GHG emission commitment for the public transit fleet through incorporation of enhanced energy and sustainability features. Construction is expected to begin in 2024 with completion in 2027.
- 4.2 Additional information on these projects, and related initiatives to reduce emissions from transit, is provided in Attachment #1 to this report.

5. Relationship to Strategic Plan

- 5.1 This report aligns with/addresses the following strategic goals and priorities in the Durham Region Strategic Plan:

a. Environmental Sustainability

1.1 Accelerate the adoption of green technologies and clean energy solutions through strategic partnerships and investment

1.4 Demonstrate leadership in sustainability and addressing climate change

b. Economic Prosperity

3.4 Capitalize on Durham's strengths in key economic sectors to attract high-quality jobs

c. Service Excellence

5.4 Drive organizational success through innovation, a skilled workforce, and modernized services

5.2 DRT's E-Mission Zero Program will showcase Durham Region as a leader in the adoption of new mobility models and clean technologies.

6. Next Steps

6.1 To build awareness about the Region's and DRT's efforts to address the impacts of climate change through transition to zero emission fuels, DRT will be sharing the E-Mission Zero framework in Attachment #1 with federal, provincial and municipal stakeholders and potential funding partners.

6.2 DRT will report back to TEC as E-Mission Zero initiatives advance, including opportunities to leverage funding and financing such as the Zero Emission Transit Fund announced by the federal government (see preliminary details in this month's GM report 2021-DRT-19) and financing for fleet transition and related infrastructure available to transit agencies through the Canada Infrastructure Bank.

7. Conclusion

7.1 DRT's E-Mission Zero is a bold and ambitious suite of initiatives that highlight Durham Region's leadership and innovation in advancing new mobility models and clean technologies. These initiatives align with the Region's Strategic Plan, corporate climate change objectives and the overall E-Mission program supporting the shift to low carbon alternatives in the transportation sector.

7.2 For additional information, contact: Jamie Austin, Deputy General Manager, Business Services, Durham Region Transit, at 905-668-7711, extension 2624.

8. Attachments

Attachment #1: DRT E-Mission Zero Framework

Respectfully submitted,

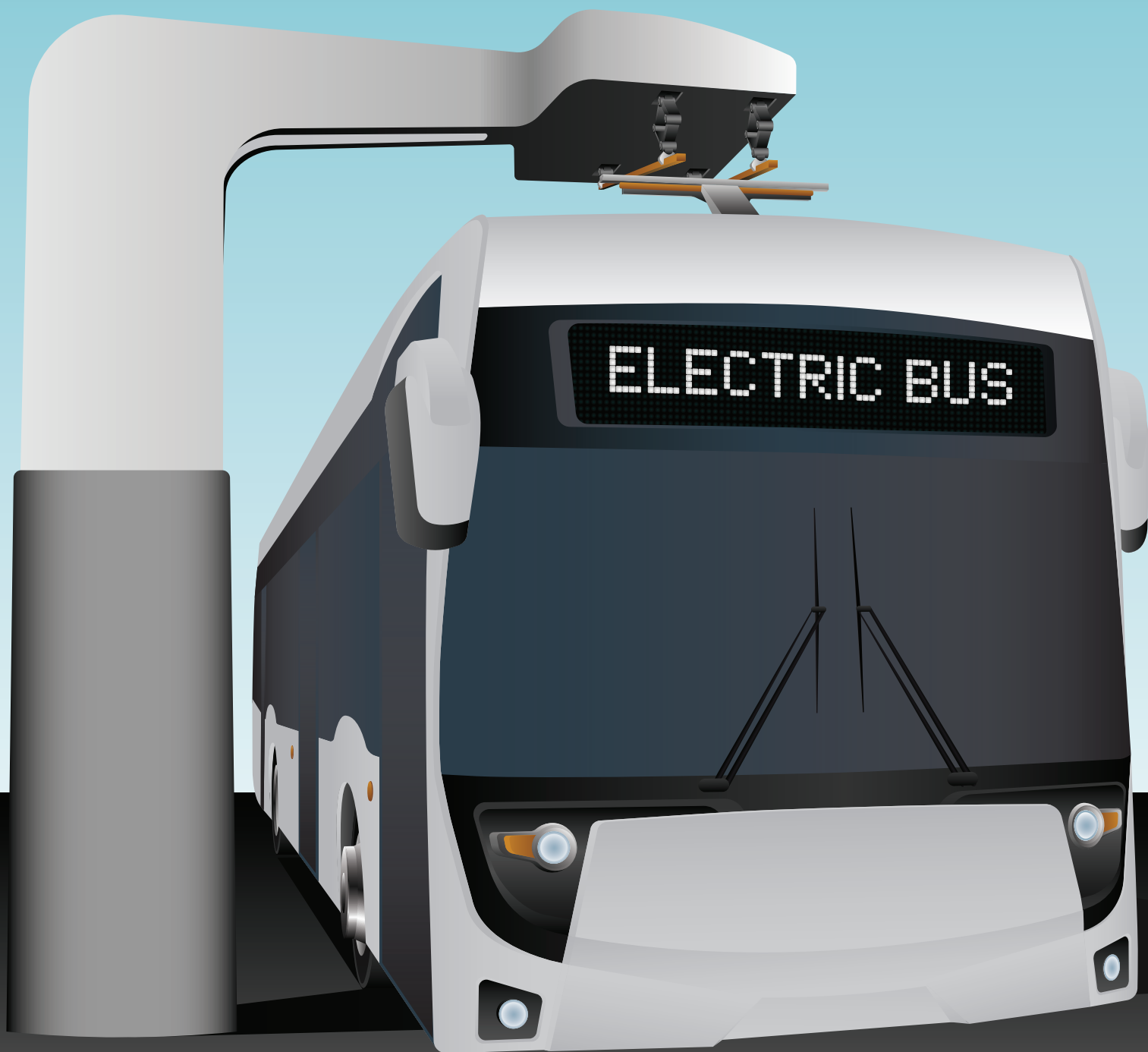
Original signed by

Bill Holmes
General Manager, DRT

Recommended for Presentation to Committee

Original signed by

Elaine C. Baxter-Trahair
Chief Administrative Officer



**A vision to reduce
greenhouse gas
emissions through
clean technologies**

About E-Mission

The Regional Municipality of Durham has partnered with Oshawa Power and Elexicon Energy on a region-wide zero emission vehicle (ZEV) education and awareness initiative called E-Mission, with partial

funding from Natural Resources Canada. Launched in summer 2021, E-Mission includes a wide variety of opportunities for residents of Durham to learn more about electric vehicles.



About Durham Region Transit

Durham Region Transit (DRT) is Durham Region's network of scheduled and demand responsive transit services, serving eight unique area municipalities: Ajax, Brock, Clarington, Oshawa, Pickering, Scugog, Uxbridge and Whitby. The system offers a variety of service options for residents and visitors; and continues to lead with innovative solutions and new customer-focused initiatives.

DRT is pleased to support Durham Region's corporate commitment to addressing climate change by implementing the **E-Mission Zero** program – a vision to reduce greenhouse gas emissions from public transit through clean technologies.



Vision

The public chooses DRT service because it's convenient and meets their mobility needs.

Mission

To deliver efficient and effective mobility solutions across the Region in the most sustainable way possible.

Principles

- Every customer trip counts.
- We provide value to customers, our stakeholders, and our community.
- We provide customer-centric integrated services that enable independent, spontaneous and worry-free travel.
- We are accountable for decisions and transparent in sharing successes and failures.
- We mitigate the environmental impact of our operations.

Values

Committed to serving all people in Durham Region, we value:

- **Leadership:** We demonstrate integrity and vision, providing the organization with good governance and management.
- **Effectiveness:** We anticipate the changing needs of the community and provide services within a framework of financial stability and transparency.
- **Innovation:** We support life-long learning and commitment to ongoing research, knowledge exchange, and continuous quality improvement.
- **Inclusion:** We provide an accessible, inclusive environment that values the diversity of our staff and the community.
- **Environmental Responsibility:** We prioritize community leadership and environmental sustainability in our operations.
- **Service Excellence:** We encourage professional excellence through collaboration, partnerships and teamwork in a culture that fosters trust and respect.

Durham Region Transit's vision for a zero-emissions bus fleet and new Operations and Maintenance facility

Summary

Durham Region Transit (DRT) is a leader when it comes to the adoption of new mobility solutions and clean technologies. Our goal is to improve the customer experience while making transit more sustainable, safer and cost effective.

Some of our actions include implementing demand-responsive micro transit; piloting autonomous and connected technologies; and transitioning the vehicle fleet to alternative fuel propulsion systems with the goal of achieving zero emissions by 2045.

Aligning with Durham Region's Corporate Climate Change Plan and Community Energy Plan, DRT will adopt renewable technologies that contribute to sustainable communities across the Region.

E-Mission Zero

To support this transition, DRT has launched **E-Mission Zero**, an ambitious and co-ordinated suite of emission-reducing initiatives intended to introduce a more sustainable network of vehicles, infrastructure and facilities over the next 25 years. Bringing new technology and smart infrastructure to Durham Region, this program is positioned to significantly reduce transit emissions; with a focus on healthy, sustainable communities for generations to come.

This vision is a transformational breakthrough for our transit system. It provides opportunities for employment growth, community partnerships and expanded services within the Region; reinforcing DRT as a safe, reliable, sustainable mode of transportation for residents and visitors.

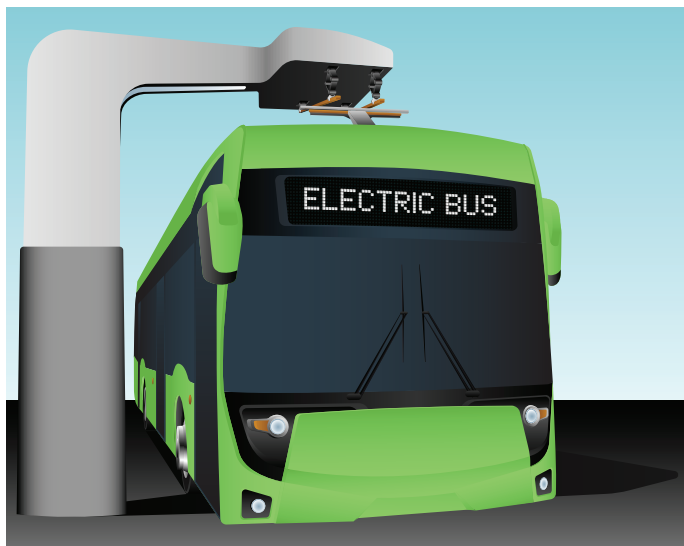
E-Mission Zero initiatives:

- Electric Bus and Charging Infrastructure Demonstration Pilot
- Zero Emission Bus (ZEB) Transition Feasibility Study
- The WAVE autonomous vehicle pilot
- Design and build of a flagship net zero ZEB operations and maintenance facility

Quick Facts

- In 2019, Regional Council approved Federal Gas Tax funding to assess up to eight battery electric buses and charging technology.
- Vehicles will be deployed on routes 900 PULSE Highway 2 and 901 PULSE Simcoe for the initial launch of the pilot in 2022.
- A feasibility study and infrastructure assessment is underway to inform the requirements and prepare a transition plan for the fleet and supporting infrastructure to achieve zero-emissions.

Electric bus pilot



What is an electric bus?

An electric bus uses a propulsion system that is powered by an on-board electricity source from a battery or fuel cell. Charging takes place via an external source, such as a power charging station.

Starting in 2022, DRT will launch a pilot involving eight battery electric buses, with models from multiple bus manufacturers. Four depot charging stations and eight pantograph down dispensers will be installed at a storage facility to enable overnight vehicle charging. Findings from the pilot will help to inform future operational decisions on electrifying transit.

The vehicles and charging systems will be stored, maintained, and operated out of DRT's Operations and Maintenance Transit facility. This is located at 710 Raleigh Avenue and 715 Farewell Street in Oshawa.

To advance this pilot project, DRT has collaborated with additional partners. The Atmospheric Fund is providing funding to support key analysis and design work for the electric bus project, including specifications for the buses and charging infrastructure.

There will also be electric grid upgrade requirements undertaken by Oshawa Power and Utilities Corporation (OPUC).

DRT will be working with eCamion which is leveraging funding from the Canadian Urban Transit Research and Innovation Consortium (CUTRIC) to develop and test new integrated energy storage and bus charging technology as part of DRT's battery electric bus trials.

A Pantograph dispenser is one type of charging system that can be installed in transit facilities in Oshawa, Ontario to charge electric buses through conductive charging.

Did you know?

DRT is purchasing its first hybrid electric buses as part of Durham Region's efforts to reduce greenhouse gas emissions and operating costs.

This initiative is part of a broader partnership with federal, provincial and municipal government-funded major transportation projects, under the Investing in Canada Infrastructure Program.

The hybrid electric buses are expected to replace up to 11 conventional diesel buses, and will be in service across Durham Region in late 2021.

Autonomous Electric Vehicle Pilot



It will also assess the operational, financial, environmental and customer service benefits, in addition to the implications, of autonomous shuttle technology in community transit.

Visit connectwhitby.ca/RideTheWAVE for more information about the autonomous vehicle.

Durham Region and DRT have partnered with the Town of Whitby, SmartCone Technologies, Metrolinx and others* to launch an autonomous electric shuttle pilot project aided by intelligent transportation infrastructure in 2021. The project, which is supported through funding from the Ontario Centres of Innovation Autonomous Vehicle Innovation Network (AVIN), demonstrates how DRT is leveraging new service models and clean technologies to help make transit safer and more sustainable in Durham.

This pilot will be the largest of its kind in Canada, operating on a six-kilometre loop between the Whitby GO Transit station and the Port Whitby area. More than 70 pieces of intelligent infrastructure, including sensors, and visual and audio signals, will be deployed along the route to provide advance notice of shuttle operations to ensure the safety of pedestrians and cyclists, shuttle passengers and other drivers. This is a Canadian first for autonomous vehicle deployments of this type and aligns with Durham Region's Vision Zero strategy to make our roads as safe as possible.

The pilot will test the physical and digital infrastructure needed to support the safe and efficient operation of connected and autonomous vehicles—through a range of traffic and weather conditions.

Did you know?

DRT launched one of the largest On Demand microtransit services in Canada in 2020. All residents of Durham now have access to public transit across the Region's 2,500 square kilometre service area regardless of where they live and all at the same low fare.

Customers can book a trip when they need it in as little as 15 minutes in advance through the On Demand app or by phone.

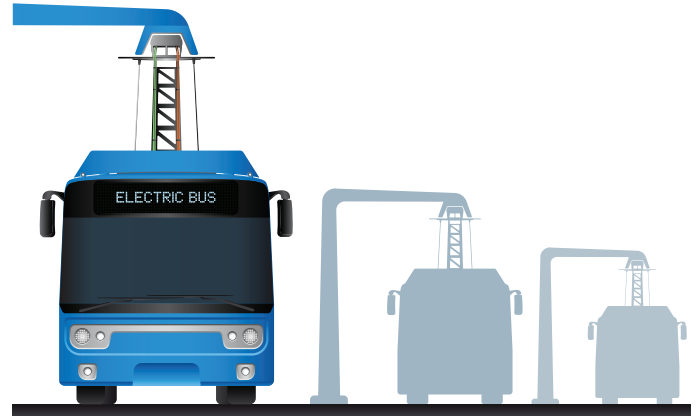
By using smaller and more flexible On Demand vehicles in place of full-sized diesel buses in lower demand urban and rural areas, DRT is making transit more available to Durham residents while reducing overall emissions from transit.

Zero Emission Bus Feasibility Study and Transition Plan

DRT has initiated a feasibility study on the adoption of zero-emissions propulsion technologies, including the development of a fleet, infrastructure and facility transition plan.

The study will inform on available technology—a review of infrastructure requirements, economic feasibility, and provide an assessment of DRT’s existing fleet, facilities, and operations. This will also assist in defining multi-year capital and operating investment requirements in support of a full transition to a zero-emissions fleet.

A final report is anticipated by end of 2021.



E-Mission Zero: Operations and Maintenance Facility 2400 Thornton Road North

DRT is planning for the design and build of a new flagship facility in north Oshawa. This facility will support a full fleet of zero emissions vehicles, while aiming for high energy standards that will allow it to be a net-zero-energy building.

The 2400 Thornton North facility will store and maintain up to 200 buses. The facility is expected to be completed and commissioned in 2026.



Photo source: iStock



Durham Region Transit
605 Rossland Road East,
Whitby, Ontario
L1N 6A3

Customer Service Centre
110 Westney Road South
Ajax, Ontario
L1S 2C8

DurhamRegionTransit.com



If you require this information in an accessible format, please contact Durham Region Transit Customer Service at 1-866-247-0055. See DurhamRegionTransit.com for more information.



The Regional Municipality of Durham Report

To: Durham Region Transit Executive Committee
From: General Manager, Durham Region Transit
Report: #2021-DRT-22
Date: September 8, 2021

Subject:

Administration of U-Pass agreement

Recommendation:

That the Transit Executive Committee recommends

That this report be received for information.

Report:

1. Purpose

- 1.1 The purpose of this report to inform the Transit Executive Committee (TEC) on the continued application of the U-Pass agreement as post-secondary institutions resume on-campus programming.

2. Background

- 2.1 Durham Region Transit Commission, Ontario Tech University, Durham College, and Trent University entered into a U-Pass agreement on May 1, 2017. The parties entered into separate one-year extension agreements in April 2019 and March 2020.
- 2.2 In December 2020, TEC approved the suspension of the U-Pass through the 2021 winter and summer semesters since programming at the post secondary institutions was remotely delivered as a result of the ongoing COVID-19 Pandemic.
- 2.3 In December 2020, TEC, the Finance and Administration Committee, and Regional Council approved a one-year extension of the U-Pass agreement to take effect September 2021, expiring August 31, 2022. As part of the extension a fee adjustment of 1.9 per cent was applied increasing the fee per eligible student by \$2.75 per semester from \$141.75 to \$144.50.

- 2.4 Ontario Tech University, Durham College, and Trent University have advised DRT that they plan to resume on-campus delivery of most of their programs starting with the September 2021 semester; some programs will continue to be remotely delivered.
- 2.5 As the post-secondary institutions resume on campus programming, the number of semester U-Passes issued by DRT is expected to fluctuate compared to pre-COVID-19 enrollment data.
- 2.6 In addition to general contract requirements, the U-Pass agreement includes provisions for enrolment status, the use of transit service by students, and reconciliation of enrolment data for students. There will be ongoing discussions around these definitions in the U-Pass agreement as the post secondary institutions await to see how the new school year evolves with the resumption of on campus learning.

3. Previous Reports and Decisions

- 3.1 2020-DRT-23 Durham Region Transit U-Pass agreement 2020-2021 academic year update

4. Relationship to Strategic Plan

- 4.1 This report aligns with/addresses the following strategic goals and priorities in the Durham Region Strategic Plan:
 - a. Service Excellence: Optimize resources and partnerships to deliver exceptional quality services and value.

5. Conclusion

- 5.1 The General Manager, Durham Region Transit, in consultation with DRT's Solicitor, will continue to apply the framework of the U-Pass agreement in consideration of post secondary institutions resuming on-campus programming.

Respectfully submitted,

Original signed by

Bill Holmes
General Manager, DRT

Recommended for Presentation to Committee

Original signed by

Elaine C. Baxter-Trahair
Chief Administrative Officer

The Regional Municipality of Durham

MINUTES

TRANSIT ADVISORY COMMITTEE

Tuesday, May 18, 2021

A meeting of the Transit Advisory Committee was held on Tuesday, May 18, 2021 in the Council Chambers, Regional Municipality of Durham Headquarters, 605 Rossland Road East, Whitby at 7:00 PM. In accordance with Provincial legislation, electronic participation was permitted for this meeting.

1. Roll Call

Present: Commissioner Barton, Chair
J. Beaton, Whitby
K. Chen, Student Association representative, Ontario Tech University,
Durham College and Trent University
R. Claxton-Oldfield, Clarington, attended the meeting at 7:26 PM
H. Hall, AAC
J. Layne, Oshawa
I. Liang, Scugog
J. Martin, Brock
M. Roche, AAC
G. Weddel, Uxbridge

All members of Committee participated electronically

Absent: C. Antram, Ajax
K. Ginter, Member at Large
J. Hollingsworth, Member at Large
A. Macci, Pickering

Staff

Present: *A. McKinley, Deputy General Manager, Maintenance, Durham Region Transit
*J. Austin, General Manager, Business Services, Durham Region Transit
*M. Binetti, Transportation Service Design, Durham Region Transit,
*R. Inacio, Systems Support Specialist, Corporate Services – IT
*C. Norris, Deputy General Manager, Operations, Durham Region Transit
*C. Tennisco, Committee Clerk, Corporate Services – Legislative Services
*** denotes staff participating electronically**

2. Declarations of Interest

There were no declarations of interest.

3. Introduction of new Committee Member - Heather Hall

Chair Barton introduced Heather Hall, the new representative on TAC for the Accessibility Advisory Committee. At the request of the Chair, Heather Hall provided a brief overview of herself.

4. Adoption of Minutes

Moved by J. Beaton, Seconded by J. Martin,
That the minutes of the regular Durham Region Transit Advisory
Committee meeting held on Tuesday, March 23, 2021, be adopted.
CARRIED

5. Presentations

**5.1 Jamie Austin, Deputy General Manager, Business Services, DRT and
Christopher Norris, Deputy General Manager, Operations, DRT re: Transit
Assistance Program and Secondary Student Transportation Incentives**

Jamie Austin and Christopher Norris provided a PowerPoint presentation on the Transit Assistance Program (TAP) and Secondary Student Transportation Incentives. J. Austin advised that the presentation provides an update on the DRT's reduced cost fare initiatives, including incentives to support the secondary schools' students.

J. Austin provided an overview of the Transit Assistance Program (TAP) Pilot.

Highlights of the presentation included:

- Overview: TAP Pilot Evaluation
- TAP Background
- Evaluation Methodology
- Summary of Results
- TAP Customer Characteristics
- TAP Card Usage
- Overall Customer Experience with TAP
- What Customers Like About TAP
- What Customer Do Not Like About TAP
- Caseworkers Impressions of TAP
- Recommendations
- Comparing TAP and the Access Pass

J. Austin provided an overview of the recommendations to: extend the TAP pilot through to March 2023; the Pay-as-you-go and Period Pass for TAP customers; discontinue the paper Access Pass by the end of 2021; waive the PRESTO card fee for Ontario Disability Support Program (ODSP) clients

shifting to TAP; develop a Communications strategy to build awareness and explain the TAP functions; investigate direct payment options with Social Services and the Province; and, assess the expansion potential to other vulnerable groups.

J. Austin noted that the Transit Executive Committee (TEC) adopted the recommendations, outlined in Report #2021-DRT-06: Transit Assistance Program pilot evaluation, at their meeting held on April 7, 2021.

C. Norris provided an overview of the Secondary Student Transportation Program and recommendations. He advised that the presentation outlines the market opportunities for school boards' students within the Region of Durham including the Durham Student Transportation Services secondary students.

Highlights of his presentation included:

- Child and Youth Fares
 - Initiatives
- Market Opportunities
 - Secondary Students in Durham Region
- Recommendations
 - Fares

C. Norris provided an overview of the recommendations that effective September 2021, the Y10 pass be discounted to \$63.50, from \$73.50; that a bulk pass purchase pilot be available to school boards in Durham Region and Durham Student Transportation Services with a minimum purchase of 570 monthly passes per month to qualify for a \$20 discount; and, that a report on the Y10 and Bulk Pass program will be brought back to TEC in June 2022 on the results of the pass programs.

C. Norris advised that at the Transit Executive Committee meeting held on April 7, 2021 TEC amended Part A) of the recommendations, of Report #2021-DRT-07: Secondary student transportation, to increase the discounted Y10 pass cost of \$73.50, by \$20.00, to lower the Y10 pass cost to \$53.50.

6. Correspondence Items

- 6.1 Direction Memo to Cheryl Tennisco, Committee Clerk, advising that Regional Council at its meeting on April 28, 2021 approved the appointment of Heather Hall, as the Accessibility Advisory Committee representative to the Transit Advisory Committee

Moved by J. Beaton, Seconded by J. Layne,

That Correspondence to Cheryl Tennisco, Committee Clerk, Regional Municipality of Durham, dated April 28, 2021, re: the appointment of Heather Hall as the Accessibility Advisory Committee member to Transit, be received for information.

CARRIED

7. Information Items

7.1 General Manager's Report – April 7, 2021 (2021-DRT-05)

Report #2021-DRT-05 from B. Holmes, General Manager, Durham Region Transit, was received.

Moved by J. Beaton, Seconded by J. Layne,
That Information Item 7.1 be received for information.

CARRIED

7.2 Paper transfers (2021-DRT-08)

Report #2021-DRT-08 from B. Holmes, General Manager, Durham Region Transit, was received.

Chair Barton recognized the efforts of the TAC regarding re-implementing the paper transfer.

A. McKinley advised the Committee that the issuing of paper transfers for cash and single cash ticket fares was re-introduced on May 3, 2021. She further advised, that to date, there appears to be no issues; and, that staff will review and report back, at a later date, to TEC on Durham Region Transit's current fare payment processes.

Moved by J. Beaton, Seconded by, J. Layne
That Information Item 7.2 be received for information.

CARRIED

7.3 On Demand outcomes and next steps (2021-DRT-09)

Moved by J. Layne, Seconded by J. Martin,
That Information Item 7.3 be received for information.

CARRIED

7.4 General Manager's Report – May 5, 2021 (2021-DRT-10)

At the request of the Chair, A. McKinley provided an overview of the ridership levels, including the fluctuation in the ridership resulting from the extension of the April 2021 'Stay At Home' provincial order. She advised that DRT staff continues to monitor the levels of the ridership; and, that staff anticipates that ridership will increase when the students return to classes in the fall.

The Committee questioned whether the ridership increased from the customers who use transit to travel to and from a vaccination clinic within Durham Region. A. McKinley advised yes, and, noted that this service has been well received by the customers in the Region.

R. Claxton-Oldfield advised the Committee that he attended a Public Information Centre and was impressed with the proposed 5 Year Service Plan for transit and going forward. He asked about the transit service plans for this September, and when the Members will be advised of these plans to inform any transit riders who may inquire. M. Binetti advised that a Report on the DRT service plans will be coming forward at the June 2, 2021 Transit Executive Committee meeting.

A. McKinley advised that the Committee Clerk will email a copy of the Report to the members when available.

Moved by R. Claxton-Oldfield, Seconded by M. Roche,
That Information Item 7.4 be received for information.
CARRIED

7.5 Zero Fare Transit – Experience and Implications (2021-DRT-11)

J. Beaton inquired whether staff has considered what a desirable transit rate would be, in terms of a zero fare and the current fare rate.

J. Austin discussed the challenges, outlined in the Report, related to zero fare transit systems; and, the experiences in other jurisdictions in terms of customers priorities for service reliability and cleanliness over zero fares. He advised that at the May 5, 2021 TEC meeting staff was asked to look at options to pursue various transit fare incentives, service investments, and the overall lost revenues and funding pressures associated with a discounted and zero fare transit system. J. Austin added that the DRT Long Term Transit Strategy envisions DRT shifting from an age based structure to an individual's ability to pay.

Discussion ensued regarding the opportunity for a free fare program, post-COVID, to grow the DRT ridership levels in certain zones including the downtown areas.

J. Austin responded to questions regarding the requirement for DRT's participation in the PRESTO agreement; the implications of a zero fare transit system with respect to the Provincial Gas Tax funding; the potential for a Greater Toronto Hamilton Area (GTHA) common fare; and, the need for a DRT competitive fare.

Moved by J. Martin, Seconded by J. Beaton,
That Information Item 7.5 be received for information.
CARRIED

8. Discussion Items

There were no discussion items to be considered.

9. Other Business

9.1 Eligibility Review – Specialized Service Process

At the request of M. Roche, A. McKinley provided an overview of the Eligibility Review – Specialized Service process. She advised that letters are being sent out to inactive registered clients that need to re-register to qualify to maintain their services.

J. Beaton inquired whether the window for Specialized Service clients to re-register could be extended, due to the extra burden of COVID, or take place via a telephone call. A. McKinley advised she would follow-up with staff in regards to the processes.

M. Roche asked staff whether the client requires a signed form from their physician to requalify for the Specialized Services.

A. McKinley advised that she would arrange for staff to present on the Eligibility Review – Specialized Service process at the September 21, 2021 TAC meeting.

10. Date of Next Meetings

Tuesday, September 21, 2021 at 7:00 PM

11. Adjournment

Moved by J. Layne, Seconded by J. Martin,
That the meeting be adjourned.
CARRIED

The meeting adjourned at 8:02: PM.

D. Barton, Chair, Transit Advisory Committee

C. Tennisco, Committee Clerk