Subject: Improving Bus Service Reliability

File Number: ACS2025-TSD-TS-0003

Report to Transit Committee on 11 September 2025

Submitted on September 2, 2025 by Troy Charter, Interim General Manager, Transit Services Department

Contact Person: Pat Scrimgeour, Director, Transit Customer Systems and Planning

613-580-2424 x52205, Pat.Scrimgeour@ottawa.ca

Ward: City-wide

Objet : Amélioration de la fiabilité du service d'autobus

Numéro de dossier : ACS2025-TSD-TS-0003

Rapport présenté au Commission du transport en commun

Rapport soumis le 11 septembre 2025

Soumis le 2 septembre 2025 par Troy Charter, directeur général par intérim, Services de transport en commun

Personne ressource : Pat Scrimgeour, Directeur, Systèmes-clients et Planification du transport en commun

613-580-2424 x52205, Pat.Scrimgeour@ottawa.ca

Quartier : À l'échelle de la ville

REPORT RECOMMENDATION(S)

That the Transit Committee receive this report for information.

RECOMMANDATION(S) DU RAPPORT

Que le Comité du transport en commun prenne connaissance du présent rapport à titre

d’information.

EXECUTIVE SUMMARY

At its meeting of April 10, 2025, Transit Committee approved Motion TC2025-19-01, which directs Transit Services to provide a plan to improve on-time bus performance. The direction of the motion states:

THEREFORE BE IT RESOLVED that the Transit Committee direct the General Manager of Transit Services to present to the Transit Committee by September 2025 a detailed plan on how bus on-time performance (reliability) will meet or surpass the 85 per cent performance target by December 2027.

This report details the operational plans that have been implemented, as well as the day-to-day elements required to provide reliable bus service. The report is structured around three primary requirements to provide reliable bus service for customers:

1. Sufficient buses and staff available to deliver service every day
2. Buses ready and able to start every trip on time
3. Conditions to allow consistent travel time over the length of every bus route

The report also outlines the existing outside factors which could negatively impact OC Transpo’s ability to reach reliability targets, including increased traffic, an aging bus fleet and challenges hiring operators and mechanics. Importantly, as was noted in the last update to the Transit Long Range Financial Plan, the current funding models for Ottawa’s transit system are not affordable over the long term. Attempts to obtain funding through other levels of government to fill gaps in the budget have not been successful thus far although commitments made by the Government of Ontario to upload the costs of Ottawa’s light rail system are promising.

As part of the City’s commitment to provide reliable and sustainable transit service to Ottawa residents, a number of plans and initiatives have been established in recent years and brought before the Transit Committee and Council, including:

- Transit Services Five-Year Roadmap
- Zero-emission bus program
- Bus maintenance action plan
- Bus Route Review and New Ways to Bus
- Transportation Master Plan (TMP)

The Five-Year Roadmap provides a vision and mission for OC Transpo, and maps out a long-term sustainable plan for bus, rail and Para Transpo service. As part of the plan for long-term sustainability, the Five-Year Roadmap sets targets and identifies key strategic initiatives that have, and will continue to, improve bus reliability and service delivery.

Service delivery measures the degree to which planned trips are delivered, and the target defined in the Five-Year Roadmap is 99.5 per cent. Regularity, for O-Train service and frequent bus routes, measures whether trips are evenly spaced, and staff have set a target of 85 per cent based on experience in other transit systems around the world. Punctuality, for less-frequent bus routes, measures whether trips arrive at stops no more than one minute early and no more than five minutes late, and staff have also set a target of 85 per cent. Any analysis of reliability for conventional service comprises all three of these measures.

City staff have also presented plans to improve transit service as part of the Transportation Master Plan (TMP) and on individual road projects that flow through the Public Works and Infrastructure Committee. These plans include transit priority initiatives such as bus-only lanes, parking and turn restrictions, and bus stop improvements.

Although the bus service delivery and performance indicators have not yet reached the targets set in the Five-Year Roadmap, the service has remained steady despite challenges facing OC Transpo, such as unanticipated changes to the *Canada Labour Code* (CLC) involving mandatory breaks, an aging diesel bus fleet, increased traffic congestion, and funding shortfalls from other levels of government.

Transit ridership has increased by 17 per cent between mid-2023, when work on the Bus Route Review began, and mid-2025, as this report is being prepared.

As detailed throughout the report, OC Transpo has established and regularly reported on the progress made on plans and initiatives to stabilize and improve bus service, despite challenges caused by financial, legislative and environmental factors that are outside of the City's control.

Moving forward, staff will continue to move forward on, and adapt, these plans to provide residents and transit customers with a sustainable transit system that is as reliable as possible.

BACKGROUND

At its meeting of April 10, 2025, Transit Committee approved Motion TC2025-19-01, which stated:

WHEREAS reliable public transit service remains a top priority for OC Transpo passengers in the City of Ottawa,

WHEREAS passengers depend on buses arriving on time, in order to get to work, school, appointments and other events,

WHEREAS unreliable bus service impacts passengers in a myriad of ways, jeopardizing the retention of passengers and challenging the agency to attract new passengers,

WHEREAS the City Manager confirmed at the December 11, 2024, City Council meeting, that bus on-time performance (reliability) in particular, remains one of the top priorities for OC Transpo,

WHEREAS within the last decade, three major periods have challenged OC Transpo's ability to offer consistent, reliable bus service, including: the construction of the Confederation LRT Line (closure of the Transitway, major detours, high absenteeism of operators), the structural and mechanical deficiencies related to the train carriages and Line following the grand opening in September 2019 (fleet had been reduced, yet replacement bus service was needed along the Line) and insufficient mechanics, operators and buses in the most recent years,

WHEREAS month after month after month, the subject of bus on-time performance (reliability) has been raised at Transit Committee meetings, with the main question being asked, what immediate investments are being made to improve overall bus reliability,

WHEREAS the hiring of mechanics and operators were welcomed investments to the transit agency, yet, according to the metrics presented to the Transit Committee (up to February 2025), overall bus on-time performance (reliability) has not improved,

WHEREAS the 2025 OC Transpo Budget was discussed and debated at the November 2024 Transit Committee and December 11, 2024, City Council meeting where specific questions about how bus on-time performance (reliability) was being prioritized and financed in the budget, with few details provided,

WHEREAS bus on-time performance (reliability) metrics consistently do not meet OC Transpo's performance targets,

THEREFORE BE IT RESOLVED that the Transit Committee direct the General Manager of Transit Services to present to the Transit Committee by September 2025 a detailed plan on how bus on-time performance (reliability) will meet or surpass the 85 per cent performance target by December 2027.

DISCUSSION

Introduction

As part of the City's commitment to provide reliable and sustainable transit service to Ottawa residents, several plans and initiatives have been established in recent years to improve or to address challenges facing transit services, including:

- Transit Services Five-Year Roadmap
- Zero-emission bus program
- Bus maintenance action plan
- Bus Route Review and New Ways to Bus
- Transportation Master Plan (TMP)

The Five-Year Roadmap provides a vision and mission for OC Transpo, and maps out a long-term sustainable plan for bus, rail and Para Transpo service. As part of the plan for long-term sustainability, the Five-Year Roadmap sets goals and identifies key strategic initiatives that have, and will continue to, improve bus reliability. As part of the second annual update of the Roadmap received by Transit Committee in April 2025 (ACS2025-TSD-TS-0001), OC Transpo outlined the following accomplishments that were achieved in 2024:

- Hired 222 bus operators and 12 Para Transpo operators
- Increased O-Train Line 1 service delivery from 97.1 per cent to 98.8 per cent
- Increased bus service delivery from 97.8 per cent to 98 per cent
- Added new zero-emission buses to the fleet with more arriving in 2025

Although the bus service delivery and performance indicators have not yet reached the targets set in the Five-Year Roadmap, the service has remained steady in the face of challenges facing OC Transpo, such as unanticipated changes to the *Canada Labour Code* (CLC) involving mandatory breaks, an aging diesel bus fleet, increased traffic congestion, and funding shortfalls from higher levels of government.

Transit ridership has increased by 17 per cent between mid-2023, when work on the Bus Route Review began, and mid-2025, as this report is being prepared. This reflects the continuing return to work on-site for many transit customers over that span of time. As staff continue to monitor ridership levels and travel patterns, some of the current allocation of resources to scheduled service may require updating to align with short- and long-term needs. If increased funding is required to achieve the service standards that Council has set, staff will prepare recommendations for Council as part of the 2026 draft operating and capital budgets.

This report recaps the current state of bus service reliability, illustrated by the measures of service delivery, regularity and punctuality. The report outlines the work that staff are undertaking to improve reliability and describes outside factors or variables that may limit the City's ability to meet goals for service reliability.

The report is structured around three primary requirements to provide reliable bus service for customers:

1. Sufficient buses and staff available to deliver service every day
2. Buses ready and able to start every trip on time
3. Conditions to allow consistent travel time over the length of every bus route

Under each of these three requirements, the report describes the current state of planned activities, opportunities for adjustments to improve outcomes, and variables that could delay progress in meeting set goals.

The report also provides information on how service reliability is reported regularly to Transit Committee, Council and on octranspo.com.

Bus Service Reliability – Current State

Staff at OC Transpo work every day to continuously improve all aspects of the transit system for customers within the policy and budgetary directions of Council. For the reliability of bus service, the Transit Services Five-Year Roadmap (ACS2023-TSD-TS-0011) set a goal of delivering 99.5 per cent of the service that is planned, scheduled, and published in customer information. Staff have also set goals to progressively improve reliability so that 85 per cent of trips on frequent routes meet regularity objectives and 85 per cent of trips on less-frequent routes meet punctuality objectives.

The details of these reliability measures are:

Bus Service Delivery: The degree to which planned trips are delivered, with a target of 99.5 per cent.

a) A measure reflecting the proportion of in-service hours delivered relative to the number of scheduled hours.

b) This is a representation of delivering planned bus service, regardless of whether the trip is on schedule.

Regularity: A metric of on-time performance for frequent routes, defined as operating every 15 minutes or more frequently, which measures whether trips are evenly spaced, with a target of 85 per cent.

a) Buses on frequent routes arriving at stops at regular and predictable intervals drive positive customer experience.

b) Trips arriving at major bus stops within a 40 per cent window of the scheduled interval are considered on time.

Punctuality: A metric of on-time performance for less-frequent routes, defined as operating every 16 minutes or less frequently, indicating how often a bus operates on time, early, or late, with a target of 85 per cent.

a) Trips on less-frequent routes that arrive as advertised drive positive customer experience.

b) Trips arriving at major stops no more than one minute early and no more than five minutes late are considered on time.

Currently, the 99.5 per cent target for service delivery is regularly met on weekends and other periods with lower service levels, but not on all weekdays. The weekday gaps are primarily the results of insufficient bus availability, traffic congestion, detours, or *Canada Labour Code* mandated breaks. Currently, the 85 per cent regularity target for frequent service is met overall, but not every day on all frequent routes. This report will outline some of the opportunities to improve this performance. Also, currently, the 85 per cent punctuality target for less-frequent services is rarely met and is the subject of corrective work that is outlined in this report.

Reliability requirement 1: Sufficient buses and staff available to deliver service every day

Current state

For Fall 2025, OC Transpo has 106 regular bus routes plus 73 special school routes, providing 7,543 separate bus-trips per weekday, serving over 480 square kilometres of the city of Ottawa and central parts of Gatineau. For each trip there must be a schedule for the bus to follow, a set amount of work hours for each operator and then, on these routes, there must be a safe and reliable bus available every morning, and a series of bus operators to drive the bus and assist customers through the full day.

Reliable bus service can only be provided if there are enough buses available, in good repair and meeting safety standards, as well as enough operators ready to drive the buses at the beginning of service and through the day.

Currently, the OC Transpo conventional bus fleet is significantly aged, with just over half of the fleet past its expected useful life. Compared to newer buses, older buses' maintenance schedules fluctuate significantly, and require additional labour hours dedicated to unpredictable corrective maintenance to keep them safe and reliable for service. The fleet plan for OC Transpo is based on having 75 to 80 per cent of buses being available for service every day, with the other 20 to 25 per cent accounting for buses undergoing routine maintenance, legislated inspections, or being out of service after major incidents requiring corrective maintenance.

The oldest half of the OC Transpo bus fleet is in the process of being replaced. In all, 350 new buses are on their way, with delivery schedules between 2025 and 2027. The first 26 new battery-electric buses arrived in early 2025 and have replaced the 28 older buses that were in the poorest mechanical condition. By Q1 2026, another 80 new battery-electric buses are expected, and the remaining 244 are expected by Q3 2027. The battery-electric buses are coming later than would have been required to assure full availability because of the additional due diligence undertaken by staff, which resulted in partnering with the Toronto Transit Commission (TTC) for the procurement of the battery-electric buses, and because of supply chain issues affecting the entire bus manufacturing industry. The decision to partner with the TTC on procurement was made to respond to recommendations made by the Office of the Auditor General in the 2022 Audit of Zero-Emission Buses - Sprint 2 – Tendering Process for 40-Foot Electric Buses (ACS2022-OAG-BVG-0008).

As the new battery-electric buses arrive, a series of critical software upgrades are in progress to manage the new characteristics of these vehicles. Upgrades to the

computer-aided dispatch system used by the Transit Operations Control Centre will provide controllers with additional data about the charge state of the buses, improving their ability to manage service disruptions, fill trips, and support bus operators in real time. A new yard management system, replacing a 20-year-old system, will expand functionality to accommodate the distinct needs of electric buses, including charging and parking logistics. A new energy management system, designed to integrate bus charging infrastructure with yard management and maintenance software, will ensure coordination of energy usage and will help to keep the City's electricity requirements concentrated in off-peak times to reduce the costs of energy. An update to the current scheduling and work management software will add the capability to account for battery-electric bus range and charging requirements, replacing manual input by staff by automating this process, ensuring more efficient and reliable work assignments for bus operators.

Maintaining buses also requires there to be enough skilled licensed truck and coach technicians to carry out all the required certification, preventative and repair work. As staff have reported to the Transit Committee, industry best practices would require the City to employ approximately 188 certified truck and coach mechanics, based on current labour hour requirements. OC Transpo currently has 138 on staff and has been conducting a targeted recruitment campaign seeking to quickly address the shortage of licensed technicians. Staff have also launched an apprenticeship program to provide hands-on experience, mentorship, and guaranteed employment to apprentices who successfully complete licensing exams. Staff have reported to the Transit Committee that working on transit buses can be a less-desirable work environment for licensed mechanics than working on other municipal vehicles or in the private sector. Whereas other types of fleets and sectors can conduct maintenance activities during regular working hours, the majority of buses are providing service to customers during these hours, therefore requiring a significant portion of maintenance activities to take place during evenings and overnight.

Finally, launching service every morning and keeping it available all day requires that there be enough bus operators available to work each day. During 2022 and 2023, staff reported to the Transit Commission that there were too few bus operators employed by the City and that a more intensive recruitment campaign and an expanded training program were being put in place. As staff reported in October 2024, that recruitment plan was successful in hiring 828 Operators, and there are now enough operators on staff to provide full scheduled service. The recruitment and training need to continue at a rapid pace, not only to account for attrition, but also because many bus operators are

taking positions as rail operators to work on the City's expanding O-Train system.

Currently, OC Transpo has 1,646 budgeted bus operator positions to support daily service delivery. After accounting for factors such as vacation, sick leave, acting assignments, and other absences, the number of available bus operators was estimated at approximately 84 per cent of the total budgeted positions in the first half of 2025. The Five-Year Roadmap sets a target of 82 per cent availability for bus operators. Actual availability was 71 per cent in 2023 and improved to 88 per cent in 2024.

This first requirement for reliable service is met when: there are enough buses in the fleet and they are in good mechanical condition; there are enough technicians on staff to keep the buses in good condition; and there are enough bus operators on staff to drive the buses in service all week long.

Plans for improvement

As outlined above, OC Transpo has 400 new buses on order, planned to arrive between Q1 2025 and Q3 2027. Of these, 350 are new battery-electric 40-foot buses and 50 are new diesel 60-foot articulated buses. Once all these buses are in service, the average age of buses in the OC Transpo fleet will be 4.5 years, well within a sustainable range for a bus fleet. If the new buses achieve the same reliability as the newest diesel 40-foot buses from 2019-2021, bus availability for service will improve, service delivery will increase, and bus service reliability will improve as a result.

In the meantime, and because of having to maintain an older bus fleet, OC Transpo has implemented the Bus Maintenance Action Plan. This action plan was presented to the Transit Commission at its meeting of April 11, 2024, as part of the Five-Year Roadmap (ACS2024-TSD-TS-0002) The action plan was developed to address short-term maintenance backlogs while establishing long-term strategies to streamline repair processes and improve resiliency in response to operational pressures.

Staff are implementing significant improvements to resource planning for bus maintenance to enhance efficiency and service reliability. A key focus is on refining the planning and scheduling of bus repairs to a predictive maintenance model to streamline maintenance workflows and better predict upcoming workloads. To address operational demands, engineers have now been included on night shifts, ensuring that technical expertise is available at all hours. Furthermore, recent investments in the technical engineering team have expanded its staffing complement, enabling the unit to better

leverage data analytics for trend analyses. As a result, potential mechanical failures and repeat issues can be predicted more accurately, and resources and parts can be allocated proactively. Additionally, staff are prioritizing workload management at body shops to better distribute repairs and maintenance tasks. Another crucial step is continuous collaboration with vendors, following recommendations from the Office of the Auditor General (OAG), to ensure high-quality workmanship and accountability in external services. To further strengthen fleet reliability, engineering staff are concentrating on individual buses that are experiencing repeat issues, to develop long-term solutions to mitigate frequent maintenance concerns.

OC Transpo has faced ongoing challenges in recruiting qualified mechanics, largely due to the demanding nature of a 24/7 operation, which requires staffing across day, evening, and night shifts. Additionally, salaries for mechanics at OC Transpo are not as competitive as those offered in the private sector, further complicating recruitment efforts. To address these issues, OC Transpo is investing in staffing resources to improve employee engagement and attract talent to its workforce. A dedicated staff group is focusing on exploring innovative strategies to attract qualified 310T mechanics. With a goal of recruiting 50 licensed mechanics, OC Transpo aims to strengthen its workforce by implementing targeted recruitment initiatives and enhancing retention efforts. Also, an enhanced apprenticeship program is now in place, expanding documented training to 51 days of classroom instruction and 60 days of structured on-the-job training, integrating scheduled job shadowing, bus-specific training, and mentorship by experienced mechanics. Apprentices follow a rotational schedule across various garages, allowing them to gain hands-on experience in different aspects of transit fleet maintenance. Staff ensure apprentices receive the necessary guidance, fostering skill retention and long-term success in the field.

Staff have built the long-term fleet plan, coordinated with the Long Range Financial Plan for Transit, to purchase replacement buses progressively and continuously, rather than in large numbers as was done for articulated buses in 2010 and is currently being done with the battery-electric buses that are replacing those 15-year-old buses. With a nominal bus fleet size of 750 and a planned replacement of buses after 15 years, there would ideally be 50 replacement buses purchased each year. This would ensure that there is an even distribution of buses of varying ages across the entire fleet, and would avoid situations like the current one, where almost half the fleet is old and unreliable and requires replacement all at one time. Achieving a more even balance of vehicle ages will take several cycles of bus purchases over the decades to come. The next recurrence of the current problem will be around 2040, and so staff today are engaged

in planning to support future generations of staff who will be making recommendations to a future Council.

Variables

The following factors can reduce the availability of buses and operators or can delay improvement in the availability of buses and operators. These are factors which plans must account for, or which can address how successful Transit Services can be in achieving set targets:

- Changes in the labour market and the attractiveness of transit as a career choice.
- Delays in the supply of new buses by the manufacturers.
- Unexpected defects in the bus fleet – By the end of Q3 2027, half of the OC Transpo fleet will be very new battery-electric buses. If there are any electrical or mechanical defects identified, whether in Ottawa or in other cities, there is the risk that large portions of the fleet might need to be out of service or that buses do not meet their availability targets.
- New characteristics of having battery-electric buses in the fleet – By the end of 2027, half of the OC Transpo fleet will be very new battery-electric buses. These buses are expected to be mechanically and structurally reliable, as they will be new, but the battery-electric energy storage, propulsion, and control systems are new to our staff and may present new challenges to adapt to and to overcome.
- The moment-to-moment availability of the right type of bus for each trip can be affected by the timing of ongoing maintenance activities. Until the completion of the Stage 2 O-Train extensions, high-capacity articulated buses are required on a large number of busy trips on frequent routes, and those articulated buses have low availability, as outlined earlier in this report, as they are among the oldest buses in the fleet.
- While the renewal of the aged bus fleet will decrease the volume of maintenance hours, the industry shortage of licensed 310T technicians could impact OC Transpo's ability to meet daily bus service availability requirements.

Reliability requirement 2: Buses ready and able to start every trip on time

Current state

When enough buses and bus operators are available for service to start as planned every morning, the next requirement is for buses to be able to start every trip on time.

Factors that can delay the ability of a bus to start its next scheduled trip on time include buses operating in mixed traffic where the schedule may be susceptible to traffic congestion, collisions, construction activity, poor weather, and detours.

For short-term delays, the Transit Operations Control Centre (TOCC) provides real-time solutions, such as assigning a standby bus to cover a trip that is susceptible to being cancelled, asking operators who are finishing their trip to extend their work and accept overtime to cover a trip, or respacing buses on frequent routes to avoid long gaps in service.

For long-term predictable but temporary delays, such as routes operating through longstanding construction zones, additional resources are required as the route will have to travel longer distances through a detour or spend more time operating through the delays of the construction.

Standby buses can provide the flexibility required to swap out a bus that has a mechanical issue or that has been delayed on a previous trip. The current supply of standby buses is very limited because low reliability of the oldest part of the fleet and they are only available when there are extra buses and operators. Currently, these buses are generally assigned a full slate of trips before they leave the garage, meaning that they are not available to be assigned by the TOCC on demand.

Plans for improvement

Improvements to ensure that buses are available to start trips on time can be made under two major categories – preventive and reactive.

Preventative improvements are those that would reduce the incidence of buses being delayed to the extent that they are not available to depart on time. Improving the mechanical reliability of buses, as outlined in greater length under the previous requirement, will reduce the likelihood that a bus suffers a defect that prevents it from completing its previous trip. Scheduling more recovery time at terminals, at a cost, can give more buffer time to absorb variation in the time that buses arrive there. Scheduling more buses and operators to stand by and be ready to fulfil trips which are at risk of

being delayed or cancelled will also help, again at a cost.

Reactive improvements are those that enhance the ability for staff to deal with a delay that has occurred and to get the next trip away from its starting point on time. Increasing the number of standby buses at key locations has a budgetary requirement – more buses and more operators are needed. Taking buses away from scheduled service to increase standby buses improves reliability but reduces the resources available for planned and scheduled service. Staff work to provide advice to Council in the annual budget on the appropriate balance between planned and standby resources. Staff have also been experimenting with having buses standing by at stations without an assigned operator, so that an operator can take over one of those buses if there is a defect with the one they have been driving, and also with having operators standing by at stations without an assigned bus, so that they can take over a bus if its operator is late for their legislated break or if they are unwell.

Staff are also monitoring advances in software that may soon be able to predict delays based on machine learning about traffic patterns and other influences and to provide advice on options that controllers might select. If these innovations prove reliable, they will enhance monitoring of service quality and speed decision-making in the TOCC.

Variables

The following factors can impact OC Transpo's ability to ensure that buses are available to start trips on time:

- Legislative changes can affect how trips need to be scheduled. For instance, in recent years, the *Canada Labour Code* was amended to require a scheduled break in the workday for bus operators, something that had not been in place previously and had not been provided for in the collective agreement between the City and its bus operators. Now that the break is legislated, it is not open to operators on late-running buses to accept working through their scheduled break to get back on time, and either a new operator needs to take over or an operator on a standby bus needs to be assigned to cover the trip. If there is no standby operator or bus available or at the right place to replace the operator taking their break, a cancelled trip may result.
- All the mechanical reliability risks as outlined under the first requirement apply here also, as any bus that breaks down needs time for maintenance crews to repair it and put it back into service. If there is no standby bus available or at the

right place to replace the broken-down bus, a cancelled trip may result.

- Scheduling more recovery time and scheduling more standby buses or operators both require additional capital funding, to buy more buses, and operating funding, to hire staff for operations and maintenance.
- All the risks described under the next requirement, for buses to complete their trips consistently on time, can also affect the ability of a bus to start its next trip on time.
- When buses are required on short notice for other purposes, such as to replace or supplement trains when there is a problem on an O-Train line, or when assigned as a shelter bus at a fire, there is an immediate impact on bus service reliability.
- Scarcity of funding always requires choices to be made between spending on reliability and spending on frequency, capacity, hours of service, or the existence of some routes.

Reliability requirement 3: Conditions to allow consistent travel time over the length of every bus route

Current state

The travel time of buses over the length of every route can vary considerably. The previous section of this report discussed the influences on having buses start their trips on time. This section is about the requirement for buses to arrive at consistent times at each stop along the route.

At the meeting of the Transit Committee on June 12, 2025, staff presented an in-depth analysis of the variations in travel time on Route 11, operating along Richmond Road, Wellington Street West, and Somerset Street. The information presented at that meeting can be read as an example of the considerations described here more generally. That presentation illustrated that the mean travel time for eastbound trips was 1 hour 7 minutes, and that the actual travel time ranges from 56 minutes to 1 hour 18 minutes. That is a range of plus or minus 16 per cent, variability that cannot be predicted in advance.

The on-time performance for buses along every route is subject to variation caused by auto traffic congestion, the configuration of roads, construction and detours, transit

ridership levels, weather, on-board incidents, and more.

Transit staff continuously work with their colleagues in other City departments to minimize the impacts of construction on transit service, to calibrate the timing of traffic signals, and to discuss ongoing traffic management. Staff also work with both colleagues and Councillors to determine whether changes to the configuration of roads can be made to both reduce travel time for transit customers and reduce variability. Both the TMP and the annual capital budgets reflect the support that Council has given for transit priority measures such as bus stop relocation, queue-jump signals, and bus-only lanes.

Two examples of streets where transit travel time is being studied include:

- Bus service along Bank Street, between Wellington Street and Billings Bridge, faces traffic congestion, lane closures for parking, and a lack of transit priority measures, which creates unreliable service for customers. The City is currently undertaking the Bank Street Active Transportation and Transit Priority Feasibility Study (Highway 417 to Rideau Canal), which includes an analysis of options to improve transit efficiency and reliability along the corridor.

- City staff are currently undertaking the St-Laurent Boulevard Transit Priority Corridor Planning and Environmental Assessment Study (Hemlock Road to Innes Road), which will look at bus-only lanes and enhancements to existing bus stops. This would be in addition to the previous implementation of a bus-only lane on St-Laurent Boulevard from Smyth Road to Innes Road, which has proven to improve service reliability in that congested corridor.

Many more locations for the implementation of transit priority measures have been approved by Council in the TMP. The TMP was approved by Council on July 23, 2025 (ACS2025-PDB-TP-0012). It provides a long-range strategy to guide the development of the city's transportation system to 2046 and outlines: "In 2024 dollars, the Priority Road and Transit Networks include approximately $3.9 billion in City-led capital projects, with $2.3 billion in transit projects and $1.6 billion in road projects." These new rapid transit projects and major transit priority projects, once complete, will reduce travel time and will reduce variability in travel time, and thus make transit service faster and more reliable.

The largest and most significant initiative that Council has taken to reduce transit travel time and reduce its variability has been the rapid transit projects that have been built

consecutively since the early 1980s. The construction of the Transitway was an industry-leading innovation, removing buses on principal corridors from city streets subject to congestion and delay and putting them on an exclusive, grade-separated roadway with improved waiting conditions for customers at stations. The Transitway accommodated the growth of the city and the growth in transit travel to the point that it was approaching its physical limit to accept more customers, prompting the construction of O-Train Line 1. That growth trend was only broken when the COVID-19 pandemic interrupted economic conditions worldwide. The O-Train project and the extensions currently under construction also remove transit operations from congested city streets and move them to a physically separated corridor, underground, at grade, or elevated, as appropriate in each area, with further-improved waiting conditions at stations, and with a much higher ultimate capacity than the Transitway, giving room for many more decades of growth.

The O-Train extensions recently opened and currently under construction also improve bus service reliability by allowing for feeder bus routes to be shorter and thus required to pass through fewer areas where congestion and other influences can cause delays. As an example, a bus route from Kanata now operates through busy traffic on March Road, uses bus-only lanes on Highway 417 where they exist and is mixed with highway auto traffic where they do not, operates through construction-influenced conditions on the Southwest Transitway and the Kichi Zībī Mīkan, then moves onto Scott Street and through several busy intersections before reaching Tunney's Pasture Station. Once the O-Train is extended to Moodie Station, that same bus route will only need to operate through busy traffic on March Road, use the bus-only lanes on Highway 417, and make the short connection in mixed traffic from the highway interchange to the new station at Moodie Drive. From there, customers will transfer to trains and buses to move to their next trip.

When preparing trip schedules for bus routes, staff set the end-to-end travel time based on a database of actual travel times so that 85 per cent of the buses will arrive within the set time. Recovery time at the terminal is then allotted so that 95 per cent of the buses will start their next trip on schedule. With this approach, there will always be 15 per cent of buses that arrive late at their destination and five percent that start their next trip late. Controllers in the TOCC and supervisors working on the street collaborate with bus operators to manage the 15 per cent that arrive late and 5 per cent that start late and to manage the trips that run early.

These 85th and 95th percentile parameters are set according to experience and

according to transit industry best practices. If the parameters are set higher, fewer trips run late, but the travel time is longer for every customer on the route and there is more likelihood of buses running early and having to stop multiple times along the route to wait for their scheduled departure time. If the parameter is set lower, more trips run late, requiring more attention from operators, supervisors, and controllers, and more customers need to wait longer than planned at stops along the route, but travel times are shorter for some trips, and fewer buses run early.

The new schedules that were developed for many routes following the Bus Route Review and for the New Ways to Bus network changes in April 2025 followed these principles and were road-tested by staff. As noted earlier, transit ridership has grown by approximately 17 per cent between mid-2023 and mid-2025, and auto traffic congestion may have increased also, so some of the schedules introduced earlier this year may already be out of date. Data that are currently being collected, and data that will be collected from the September-to-December period with more customers back to school and back to work, will inform whether further adjustments are made to schedules during 2026. Completion of current construction projects, such the MTO's Highway 417 work and work to build the Stage 2 O-Train extensions, will reduce auto traffic congestion, which will improve bus reliability.

Plans for improvement

Improving the consistency of travel time along bus routes can be accomplished with a combination of large projects and small projects and with continuous improvement in operating conditions and practices.

Large projects include the continuing development of Ottawa's rapid transit network, as set out in the TMP. Key transit investments approved by Council as part of the TMP include:

- New and expanded Transitway corridors, such as the Baseline-Heron Transitway, the Cumberland Transitway, the South Transitway, the Southwest Transitway, the Kanata North Transitway, and the Heron-Walkley Transitway. Building these planned Transitway projects will remove buses from congested curb lanes, where they can be delayed by right-turning cars and stopped delivery vehicles and will allow for improved coordination with the timing of traffic signals to allow buses to cross intersecting streets.

- Continuous bus lane projects on Carling Avenue, Blair Road, St-Laurent Boulevard, Montréal Road, Merivale Road, and Conroy Road. These will allow buses in established and growing areas to reach the O-Train and Transitway network with less delay from auto traffic congestion.

- O-Train extensions to Kanata/Stittsville and Barrhaven. These will allow customers to travel more quickly towards the central part of the city, avoiding traffic on streets within Kanata and Barrhaven and bypassing any incidents or congestion that slow traffic through the Greenbelt.

As noted earlier, every one of the projects listed in the TMP will improve transit service reliability.

Smaller projects include the continuing development and installation of transit priority measures and active transportation projects, guided by data and analysis such as that presented to the Transit Committee for Route 11. These can include relocating bus stops to positions so that buses do not need to merge to re-enter traffic, building bicycle lanes to separate bicycles from buses, changing parking regulations and traffic signal timing to favour transit, or adding traffic signals that react to the presence of buses and give priority for those buses to move ahead of autos.

Controlling and reducing the variability of travel time where rapid transit projects and transit priority projects are possible will help to minimize how late the 15 per cent of trips will be that are not within the 85th percentile on which the schedules are based. Reduced variability through transit priority measures allows shorter scheduled travel times.

Continuous improvement can include:

- Making bus routes shorter and more self-contained, so that the effect of an incident on one part of a route or on another linked route will cause fewer delays for buses and customers on the rest of the route.

- Making bus routes straighter, with fewer diversions off the main travelled path, reducing the number of turns required and the exposure to sources of congestion.

- Having route terminus points at Transitway and O-Train stations, where more spare buses and operators – whether scheduled or agreeing to work overtime – are available to cover trips that are delayed.

- Regularly collecting and analyzing data from thousands of bus trips to periodically adjust not only the scheduled end-to-end travel time but also the allocation of travel time between stops along the route, improving the ability for customers to know when the bus is expected and increasing their confidence that it will arrive at that time.

Variables

- Adverse weather creates a significant risk to on-time performance. Snow and freezing rain create difficult driving conditions for bus operations and all other vehicles on the road, resulting in slower speeds and usually acute traffic congestion. Buses operating in reserved lanes that remain clear or on Transitways can move ahead without being obstructed by traffic but are still subject to delay from the weather. During heavy snow events, protocols restrict the use of articulated buses, close some bus stops, and trips may be changed. In 2025, two major snowfalls in February reduced punctuality to 72 per cent for the month from 75 per cent in January and March.

- While day-to-day observed levels of traffic congestion can be considered when setting scheduled travel times for each route, increased congestion resulting from accidents, road closures on parallel corridors, construction detours, and events will often delay buses, especially those operating in mixed traffic.

- Implementation of transit priority measures, while ideal for transit customers and transit operations, is always balanced against other road users for other means of travel – pedestrians, cyclists, and car and truck drivers – and other urban purposes such as curbside parking and deliveries. Design and integration of transit priority measures, as for all road features, must also account for accessibility so everyone can use the facilities safely. When there is a disagreement within the community about the priorities for a section of road, Councillors and staff can both be involved in developing a compromise. Because the nature of every discussion is different, this can lead to inconsistent application of transit priority across the city.

- The construction of new rapid transit projects requires substantial capital funding, from not only municipal sources but often also senior levels of government. The

availability of such funding may not always match the priority times for the City and may not always be continuous.

- Investment of increased transit operating funding can be directed to improving service reliability by adding travel time to schedules, by adding recovery time at terminals, and by adding standby buses and operators. It can equally be directed to improving the extent of the bus route network into unserved or underserved areas or to increasing service frequency to reduce waiting times and reduce congestion. Currently, staff do not have policy direction from Council on whether to favour reliability over service levels, nor is there a mechanism to ensure that budgeted funding is increased to maintain or improve service reliability as auto traffic congestion increases with the growth of the city.

Concluding remarks

As detailed throughout this report, OC Transpo has established and made progress on various plans and initiatives to stabilize bus service, despite challenges caused by financial, legislative and environmental factors that are outside of the City's control. Moving forward, staff will continue to implement, and adapt, these plans to provide residents and customers with a sustainable transit system that is as reliable as possible.

Providing good transit service that effectively meets the needs of people in Ottawa is the primary mandate of the Transit Services Department. A good transit service has many attributes – availability, efficient travel times, comfort, safety, reliability, convenience, accessibility, price for customers, affordability for funding sources – and the policy and budget decisions that Council make necessarily constitutes a balance of these and other factors. An emphasis on reliability must be balanced against all the other qualities that make up a good transit service. Staff will always follow the policy direction of Council, in this case particularly if additional emphasis is given to maximize the reliability of service over other considerations.

Staff will continue to report regularly to the Transit Committee and to Council on service reliability, as outlined earlier, along with the other performance measures, and will continue to publish reliability measures on octranspo.com. Staff will continue to monitor reliability every minute of every day and will continue to make service adjustments to avoid, react to, or compensate for delays, to keep customers moving on their way to their destinations.

FINANCIAL IMPLICATIONS

There are no financial implications to receiving this report for information.

LEGAL IMPLICATIONS

There are no legal impediments to receiving this report for information.

ACCESSIBILITY IMPACTS

OC Transpo adheres to the City of Ottawa's Municipal Accessibility Plan (COMAP) and the 2024-26 Accessibility Plan fulfils OC Transpo's federal obligations under the *Accessible Canada Act (*ACA, 2019), as services operate interprovincially. Any policy or procedural development, as well as customer communications and public engagement identified within this report, will include the application of the City's Equity and Inclusion Lens.

Staff will also ensure that any applicable accessibility legislation, standard operating procedures, and guidelines are adhered to during the execution of the work required to address the recommendations within Motion TC 2025-19-01.

RISK MANAGEMENT IMPLICATIONS

The risks associated with "meeting or surpassing the 85 per cent performance target by December 2027" are outlined in this report.

RURAL IMPLICATIONS

The City's transportation network is designed to provide options for all residents. Once completed, Stage 2 O-Train expansion will span from Trim Road to Moodie Drive and south all the way to Riverside South. Rural residents will have access to Park and Ride lots at various stations which will allow them to easily use public transit in the urban area. In addition, rural Connexion routes operate during peak periods from several rural villages. Achieving the 85 per cent performance target, as directed by the motion, will benefit all transit customers, including those in rural areas.

TERM OF COUNCIL PRIORITIES

The 2023-2026 Term of Council Priorities include:

- A city that is more connected with reliable, safe and accessible mobility options.
- A city that is green and resilient.

DISPOSITION

In November 2019, the Transit Commission passed a motion directing staff to provide regular updates on service performance. That reporting mechanism has continued as a standing item on each Transit Commission (now Committee) agenda and is reflected formally in the Transit Committee Terms of Reference.

Transit Services will continue to provide key performance indicators (KPIs) updates to Transit Committee through the OC Transpo Update - Para Transpo, Rail and Bus presentation.